

# The Mining Journal.

## RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

[The MINING JOURNAL is Registered at the General Post Office as a Newspaper, and for Transmission Abroad.]

0. 2324.—VOL. L.

LONDON, SATURDAY, MARCH 6, 1880.

WITH  
SUPPLEMENT.] { PRICE ..... SIXPENCE.  
PER ANNUM, BY POST, £1 4s.

JAMES H. CROFTS, STOCK AND SHARE BROKER,  
AND MINING SHARE DEALER,  
No. 1, FINCH LANE, CORNHILL, LONDON, E.C.  
ESTABLISHED 1842.

Business transacted in all descriptions of MINING Stocks and Shares (both Foreign), Consols, Banks, Bonds (Foreign and Colonial), Rail-Insurance, Assurance, Telegraph, Tramway, Shipping, Canal, Gas, and Dock Shares, and all Miscellaneous Shares.

Business negotiated in Stocks and Shares not having a general market every Friday a general and reliable List issued (a copy of which will be forwarded regularly on application), containing the prices of the week.

MINES INSPECTED.

OFFICES: CITY BANK, LONDON—SOUTH CORNWALL BANK, ST. AUSTELL.

ALL DEALINGS in the following, or part:—  
Alma, 14s. 20 Great Holway.  
Alderman, 21s. 20 Herodsfoot, 24.  
Ballyn, 25. 50 Hington Down, 26s 6.  
Ford United, 19s 6. 50 I.X.L., 6s. 6d.  
Idris, 100 Javall, 8s.  
Hills, 24 2s. 6d. 50 Killifreth, 26s. 3d. c.p.  
Brea, 23 1s. 100 Leadhills, £3 17s. 6d.  
Mentria, 25. 50 Last Chance, 12s. 6d.  
Marvon Cop., 23s. 15 Mineral Corporation.  
Olapo, 21s. 20 Marke Valley, £2 17s. 6d.  
Ron, 22 5s. 20 Monia, £14.  
Marian, 24s. 50 Nouveau Monde, 30s.  
O'Kitchen, 28s. 50 N. Penstruthal, £2 22s.  
O'Cop, 23 1s. 6d. 60 N. D'Eresby, 20s.  
Consolidated, 14s. 50 N. Herodsfoot, 13s. 9d.  
Looch, 26s 10s. 20 Pandora, 18s. 9d.  
Eresby Mountain, 21s. 25 Port Nigel, £2 15s.  
West Crebor, 21 3s. 6d. 200 Port Phillip, 11s.  
West Lovell, 22 10s. 100 Prince of Wales, 15s.  
West Chiverton, 23. 15 Panulicillo, 25 3s. 9d.  
Cardon, 24 1s. 75 Parys Copper, 36s.  
West Van, 22 17s. 6d. 10 Phoenix, £5 12s.  
Roman Grav., 13s 9 50 Pestarena, 8s.  
Eresby, 25. 20 Ruby, £4 8s.  
B. & A. Cop., 27s 6 20 Richmon, 21s.  
Agataff, 23 1s. 3d. 50 Ross Grande, 5s. 3d.  
Contino, 23 1s. 50 Roman Gravels, £1 11s.  
Seny, 27s. 10 Scottish Auct., £2 2s.  
B. & C. 16s. 3 100 Ditto Ord., 7s. 6d.  
B. & G. 16s. 3 50 B. Indian Gold, £2 16 3

BUSINESS at close prices in—  
NORTH HERODSFOOT. SOUTH PENSTRUTHAL  
NORTH PENSTRUTHAL

RAILWAYS—SPECIAL BUSINESS.

FOREIGN BONDS—SPECIAL BUSINESS.

Fortnightly accounts opened on receipt of the usual cover.

JAMES H. CROFTS, 1, FINCH LANE, LONDON.

ESTABLISHED 1842.

R. W. H. BUMPUS, STOCK AND SHARE BROKER,  
AND MINING SHARE DEALER,  
44, THREADNEEDLE STREET, LONDON, E.C.

ESTABLISHED 1867.

BUSINESS transacted in STOCK EXCHANGE SECURITIES  
and MISCELLANEOUS SHARES of every description.  
RAILWAYS, BANKS, FOREIGN and COLONIAL BONDS.  
TRAMWAYS, TELEGRAPHES, and all the LEADING INVESTMENTS.

Accounts opened for the Fortnightly Settlement  
A List of Investments free on application.

R. W. H. BUMPUS has SPECIAL BUSINESS in the undermentioned:—  
Almada, 20 Eberhard, £4 16s. 3d. 15 Polrose, £2 25s.  
Belford, 18s. 6d. 25 Flagstaff. 50 Parys Copper, 36s.  
Bodridia, 50 Fronton, £3 3s. 25 Phoenix, £2 15s.  
Blue Tent, 22s. 75 Glenroy, 27s. 6d. 40 Pandora, 19s. 6d.  
Carn Brea, 29s. 35 Great Holway. 50 Port Phillip, 10s. 9d.  
Consolidated, 20s. 6d. 15 Herodsfoot, £2 4s.  
Carnarvon, 22s. 6d. 40 Hington, 26s. 6d. 10 Roman Gravels, £1 11s.  
Cape Copper, £39 1s. 50 Killifreth, 25. 3d. 50 South Darren, 23 8s 9  
Don Pedro, 24s. 3d. 15 Mellanear, £6 1s. 50 So. E. Wynnaid, 22 3 9  
Dolcoath, 28s. 20 Marke Valley, £2 21s.  
Dowent, 23s. 50 Morfa Du, 28s. 6d. 10 Tamar, 28s. 6d.  
Devon Consols, 24s. 30 N. Wh. Pever, 20 Wh. Grenville, £2 25s.  
East Caradon, 24 1s. 40 No. Herodsfoot, 12s 6d. 15 Wheal Sisters, £2 15s.  
East Lovell, 22 1s. 100 Nouveau Monde, 25s 5 40 West Phoenix, £2 25s.  
E. Roman Grav., 21s. 50 New Querbara, £4 1 3 50 West Ashton, 20s.  
West Crebor, 21s. 6d. 75 Pen-yr-Osedd. 50 West Holway.  
East Pool, 22s. 40 Prince of Wales, 14s. 5

SPECIAL BUSINESS, at close prices, in the SHARES of all the principal  
HOME and FOREIGN MINES.

Mr. BUMPUS devotes special attention to these Securities, and is in a position  
to afford reliable information and advice to intending investors and others.

The following Mines are particularly recommended:—  
WHEAL GREENVILLE. WHEAL PEEVOR. WEST PEEVOR.  
NEW PEEVOR. WHEAL SISTERS. WEST PHENIX.  
PEY-EN-YR-ORSEDD. DERWENT. SOUTH DARREN.

WILLIAM HENRY BUMPUS, SWORN BROKER.  
OFFICES: 44, THREADNEEDLE STREET, LONDON, E.C.

ESTABLISHED 1867.

M. W. TREGELLAS, 19, BISHOPSGATE STREET  
WITHIN, E.C.,  
sells in all descriptions of MINING SHARES at close market prices, and is  
in a position to do business in SANTA BARBARA, PITANGUI,  
OIAPO, and BRAZILIAN GOLD MINES.

BRAZILIAN GOLD MINES (LIMITED).

WALTER TREGELLAS strongly recommends the immediate purchase of these  
shares. The company holds a series of extraordinarily rich gold mines, which  
surface scratchings have yielded gold of the value of upwards of £150,000.  
The company likewise holds a mountain of "Jacutinga." The shares are £1,  
paid up.

The Brazilian Gold Mines will be the great Gold Mining Prize of 1880.  
Full particulars on application.

M. R. GEORGE BUDGE, STOCK AND SHARE DEALER,  
9, GRACECHURCH STREET, LONDON, E.C. (Established 28 years).  
ALL BUSINESS TRANSACTED FREE OF ANY CHARGE FOR  
COMMISSION.

Notice to Investors and Speculators.

Mr. BUDGE has DEALINGS in—  
Almada, 20 East Chiverton, 20 Panulicillo.  
Blue Tent, 10 Penhalls.  
Blue Hills, 20 Parys Copper.  
Bodridia, 35 Glenroy.  
Canadian Copper, 50 Great Holway.  
Carnarvon, 170 Killifreth.  
Copiapo, 50 Lady Ashburton.  
Cambrian, 50 Penhalls.  
Consolidated, 40 New Pever.  
Cwm Pfry, 84 New Kitty.  
Derwent, 35 New Wye Valley.  
East Caradon, 80 Pen-yr-Osedd.  
Prince of Wales, 35 Prince of Wales.

SPECIAL BUSINESS in Frongoch Shares as Buyer or Seller.  
Agree, and he strongly recommends the purchase of these shares—10s. paid,  
25s. each. This mine is no speculation, as the reserves of tin enable Mr. BUDGE  
to state that in four months' time the mine will be making profits.  
See letter, page 278.

### STOCK AND SHARE MARKETS

Prices of STOCKS and SHARES in RAILWAYS, BANKS, ENGLISH  
and FOREIGN GOVERNMENT SECURITIES, GAS, MINES, INSURANCE,  
and other Stock Exchange Securities, and various important information  
forwarded on application to—

MESSRS. PETER WATSON AND CO.,  
18, AUSTIN FRIARS,  
OLD BROAD STREET,  
LONDON, E.C.

BUYER and SELLER of SHARES at the close Market Price of the day.  
SHAREHOLDERS and INVESTORS may rely on all business being  
punctually and faithfully carried out.

A DAILY LIST OF PRICES sent (free) on application, either personally  
or by post.

BANKERS: THE ALLIANCE BANK (Limited).

MESSRS. PETER WATSON AND CO.'S  
BRITISH AND FOREIGN MONTHLY MINING NEWS  
—STOCK AND SHARE INVESTMENT NOTES—MINES,  
MINERALS, AND METAL MARKETS—SHARE LIST,  
No. 815, VOL. XV., for FEBRUARY month, will shortly be  
ready, and will be sent to customers on application.

Annual Subscription..... 5s. | Single Copy..... 6d.

MESSRS. PETER WATSON AND CO.,  
18, AUSTIN FRIARS,  
OLD BROAD STREET,  
LONDON, E.C.

M. R. ALFRED E. COOKE,  
DEALER at NET PRICES in EVERY DESCRIPTION of STOCKS  
and SHARES,  
76, OLD BROAD STREET, LONDON.  
ESTABLISHED 1853.

TEMPORARY DEPRESSION.—Advantage should AT ONCE be taken of the  
lower prices now ruling, and shares in ESTABLISHED and PROGRESSIVE  
Mines purchased. ALL SHARES supplied at LOWEST NET PRICE.

STEADY LEAD SHARES.—HERODSFOOT, NORTH HERODSFOOT,  
HERODSFOOT, PORT NIGEL, and NORTH D'ERESBY MOUNTAIN.—  
Specially Recommended.

FOR RELIABLE and PROFITABLE ADVICE and CHEAP SHARES, EVERY  
BONA FIDE INVESTOR should send for the "INVESTOR'S GAZETTE,"  
post free three stamps. New Number next Friday. Early application is  
necessary.

### SPECIAL NOTICE.

Mr. COOKE's Offices adjoin the Stock Exchange and Mining Market, but  
for the further convenience of clients they are now in telegraphic communication  
with the Stock Exchange.

ALFRED E. COOKE,  
76, OLD BROAD STREET, LONDON.  
(ESTABLISHED 1853)

Over 13 years at the above offices, adjoining the Stock Exchange and  
Mining Markets.

STOCKS AND SHARES,  
FOREIGN BONDS, TELEGRAPHES, TRAMWAYS, RAILWAYS, AND  
OTHER LEADING SECURITIES.

M. R. JAMES STOCKER, STOCK BROKER,  
2, CROWN COURT, THREADNEEDLE STREET, LONDON, E.C.  
ESTABLISHED 1848.

SPECIAL BUSINESS in the following:—  
Almada Consolidated. 50 Grogwinion, £3 3s.  
Carnarvon, 22s. 6d. 50 Herodsfoot, £2 4s.  
Chontales, 8s. 9d. 50 Hington, 24s. 9d.  
Consolidated, 18s. 50 Leadhills, £3 17s. 6d.  
Dowent, 23s. 50 Last Chance, 10s. 6d.  
Devon Great Cons., 13s. 50 Marke Valley, 38s. 9d.  
Don Pedro, 24s. 50 Morfa Du, 28s.  
E. Chiverton Con., 22s. 50 North Penstruthal, 45s.  
Rom. Gravels, 13s. 9d. 50 Nouveau Monde, 27s. 6d.  
East Lovell, 22 7s. 6d. 50 Parry Corporation, 35s.  
East Caradon, £3 17s. 6d. 50 Polrose, £2 25s.  
East Crebor, 18s. 9d. 50 Prince of Wales, 14s.  
Eberhard, 24 16s. 3d. 50 Pestarena, 8s. 3d.  
Exchequer, 9s. 3d. 50 Phoenix, £5 12s.  
Flagstaff, 22s. 50 Penhalls, £3 3s.  
Glenroy, 28s. 50 Richmond, £12 16s.  
BANKERS: LONDON AND WESTMINSTER.

JOHN B. REYNOLDS, STOCK AND SHARE DEALER,  
37, WALBROOK, LONDON, E.C.

Business transacted at net prices in all kinds of Stocks and Shares. In-  
formation concerning various securities obtainable from all parts of the United  
Kingdom. Special Correspondents can be retained from all mining districts.  
Mines inspected and reported upon at most moderate charges.

Information obtained concerning such shares as are not dealt in on the  
Mining Market.

ESTABLISHED 20 YEARS.—BANKERS: LONDON & SOUTH-WESTERN.

JOHN B. REYNOLDS, 37, WALBROOK, LONDON, E.C.

gave as the result of his investigations strong recommendations for  
the purchase of the following SHARES, and the advance in each instance  
is correctly marked underneath since such recommendation was made. He  
predicts for WEST KITTY and other Mines an equal advantage to buyers:—

Recommended at—per share. Present price.  
Dolcoath ..... 22s 2d ..... £60 ... 262 1/2  
South Condurrow ..... 10 ... 10 1/2 ..... 11 ... 12  
Tincroft ..... 5 ... 6 ..... 21 ... 22  
Mellanear ..... 3 1/2 ... 4 ..... 6 1/2 ... 6 1/2  
Wheal Pever ..... 5 1/2 ... 6 1/2 ..... 30 ... 31

Mr. REYNOLDS urges his numerous correspondents to telegraph their in-  
structions with regard to any shares, and recommends them to BUY and  
SELL only for cash, especially in the leading mines, where fluctuations are so  
considerable. Mr. REYNOLDS attends personally to every branch of his  
business.

THE RECENT GREAT ADVANCE IN MINING SHARES.—  
Large profits were realised by those who bought up cheap shares in mines  
situate in the rich mineral centres, principally those around Camborne, Cornwall.  
This district is the richest for tin and copper in the world. The following mines  
illustrate this fact:—Dolcoath has returned in profit 2,000,000, Tincroft 310,000, East Pool 112,000, Carn  
Brea, 300,000, South Condurrow 40,000, North Bassett 110,000, Wheal Bassett  
350,000, Wheal Buller, 40,000, and Stray Park 300,000.

The next great success of this rich group of mines will be CARN CAMBORNE,  
which is bounded on the north by Dolcoath, now selling for 300,000, and on the  
south by South Condurrow, now selling for 80,000. Four valuable tin and copper  
lodes traverse Carn Camborne sett. One of these is Dolcoath's south tin lode,  
and another is Carn Brea's celebrated "Druid" copper lode, which returns  
enormous quantities of copper in that mine.

Dolcoath is half a mile deep, Carn Camborne is but 95 fms., and has already  
returned 175,000 worth of copper. The present company get the entire benefit  
of the explorations made by former workers. The mine is divided into 6000  
shares, and at their present price (2s. each) is selling for about the original cost  
of the plant, machinery, and buildings at surface.

For further particulars and to secure shares at 2s. each, immediate application  
to be made to Messrs. ENDENAN and CO., Mine Owners and Stock and Share  
Dealers, 65, Gracechurch-street, London, E.C.

Established 1881.—BANKERS: LONDON and WESTMINSTER, LOTHBURY.

THE "DIFFERENTIAL" PUMPING ENGINE  
(DAVEY'S PATENT),  
FOR  
DRAINING MINES, WATER SUPPLY OF TOWNS, IRRIGATION,  
SUPPLYING DOCKS, PUMPING SEWAGE, and GENERAL  
PUMPING PURPOSES

HATHORN, DAVEY, AND CO.,  
LEEDS.

HATHORN, DAVEY, and Co. have Patterns of "Differential" Engines of all  
sizes, from 5 to 500-horse power, and have facilities for supplying very power-  
ful Engines and Pumps at a short notice.

See Illustrated Advertisement every alternate week.

### NOTICE OF REMOVAL.

G R A N V I L L E S H A R P,  
32, QUEEN VICTORIA STREET, LONDON, E.C.

M R. C H A R L E S T H O M A S,  
MINING AGENT, STOCK AND SHARE DEALER,  
3, GREAT ST. HELEN'S, LONDON, E.C.

M R. A L F R E D T H O M A S,  
MINING AGENT, AND STOCK AND SHARE DEALER,  
10, COLEMAN STREET, LONDON, E.C.

Second Edition, just published, price 6d.  
HOW TO TAKE ADVANTAGE OF THE COMING RISE IN PRICES.

M R. EDWARD ASHMEAD, 62, CORNHILL, LONDON,  
LONDON MINE AGENT, ACCOUNTANT, AND AUDITOR.

TO INVESTORS, SHAREHOLDERS, TRUSTEES,  
SAFE DIVIDEND INVESTMENTS PAYING 4 to 6 and 10 PER CENT.  
PER ANNUM ON PRESENT OUTLAY.

S H A R P ' S I N V E S T M E N T C I R C U L A R.

SHOULD BE CONSULTED BY INVESTORS AND SHAREHOLDERS.

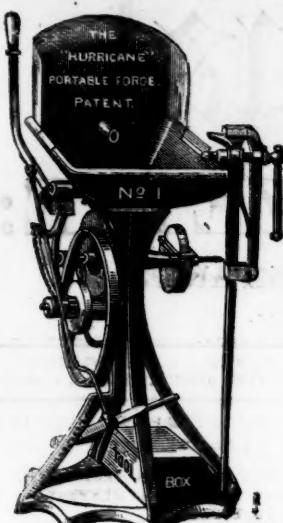
It is a Reliable "Guide," giving valuable information and Sound Advice, &c.  
It gives Market prices; Dividends upon outlay, when payable; Reports, &c., &c.

IT CONTAINS ALL THE SAFE INVESTMENTS IN THE FOLLOWING:—

English, Foreign Railways.  
Preference, Debenture Stocks.  
Indian, American Stocks.  
Bank, Financial Shares.  
Tramway, Telegraph Shares.  
Municipal Bonds.

Insurance, Gas, Waterworks.  
Colonial, Foreign Stocks.  
British, Foreign, Colonial Mines.  
Tea, Land Shares.  
Shipping, Dock Shares.  
Miscellaneous Shares, &c., &c.

## A COMPLETE, PORTABLE, AND EFFICIENT SMITHY FOR £7 7s.



## THE "HURRICANE" PORTABLE FORGE

(HARDINGE'S PATENT).

A Complete  
and  
Portable Smithy,  
possessing a  
Powerful Blast,  
a Forge,  
a Hearth,  
a Vice,  
an Anvil,  
a Rivetter's Hearth,



a Brazier's Hearth,  
a Mine Ventilating Apparatus,  
a Tool Grinder (Emery),  
a Cutter,  
a Circular Saw and Bench,  
a Polishing Wheel,  
a Chuck,  
Two Drills,  
a Drill Rest,  
and a Tool Box.



## PATENTED IN EUROPE AND AMERICA.

The "HURRICANE" Patent Portable Forges possess advantages unobtainable with Forges of any other description. They command themselves to the world, not only as being complete and portable Smithies and mine and ship ventilators of the highest practical value, but also for the extreme ease with which they are worked, the simplicity and compactness of their construction, and the steady continuous blast, which speedily creates an unusually high degree of heat. The "Hurricane" Portable Forges are made in nine distinct sizes, embrace attachments which form a complete smithy, and are suitable for all purposes in all climates.

The Rivetter's Hearth is readily connected to the nozzle of the forge by means of a flexible tube, and can be used in any awkward position for keeping rivets hot and close to the work. The Brazier's Hearth is similarly worked, but is constructed with a nozzle on opposite sides for producing heat equally on both sides of the work, and is particularly adapted for brazing band saws, &c. Hand Blowers for all ventilating purposes, and for fixed blacksmiths' hearths, are made on a new principle.

The Lever Handle can be used at any angle, or taken off altogether, and the Treadle used instead. There is a Recovering Spring to raise the Handle or Treadle. This arrangement secures all the easy motion of the old-fashioned bellows, is worked with much less effort than the Rotary Hand Wheel, and there are no Leather Bands to be burnt, no Cranks, and consequently no "Dead Centres." Three larger sizes than those given below are kept in stock.

## A 1-INCH BAR OF IRON CAN BE RAISED TO A WELDING HEAT IN TWO-AND-A-HALF MINUTES.

## PRICES.

No. 0.—THE AMATEURS', JEWELLERS', OR DENTISTS' FORGE AND WORKSHOP, 3 ft. by 1 ft. 6 in., and 2 ft. 8 in. high, fitted as a complete Smithy, including Forge, 6-in. patent Fan Blast, Hearth, Parallel, Vice with Anvil, Emery Wheel, Chuck, 2 Drills, a Cutter, Polishing Wheel, Crucible and Tongs, Ladle, Spanners, Drawers, Treadle and Flexible Band, Automatic Clutch, &c., &c. Weight, 84 lbs. Muffler, for conveying the smoke to chimney, 15s. extra.	£8 8s. 0d.
No. 1.—FORGE, HEARTH (lined with fire-brick), and PAN 18 in. square, 2 ft. 7 in. high. Weight 132 lbs., with 8-in. patent Fan Blast, Spanners, and Emery Tool Grinder, complete, on standard	£5 15s. 0d.
No. 2.—DITTO DITTO. Weight, 156 lbs. Fitted with 2½-in. Vice with Anvil, 4-in. Emery Wheel or Grindstone, Chuck, Cutter, and two Drills, a Buffing Wheel or Polisher, Spanner, Tool Chest, Lock and Key, &c. Lever and Treadle. Muffler, 15s. extra.	£7 7s. 0d.
No. 3.—FORGE AND HEARTH, 26 in. by 34 in. Weight, 160 lbs.: 10-in. patent Fan Blast, Spanners, and 5-in. Emery Wheel, complete on frame with four legs and two travelling wheels. Lever and Treadle	£8 8s. 0d.
No. 4.—DITTO DITTO. Weight, 184 lbs. Fitted with Two Travelling Wheels, 5-in. Circular Saw and Bench, and all the attachments of No. 2 Forge, but increased in suitable proportions. Hood, 21s. extra. Muffler, 35s. extra	£10 10s. 0d.
No. 5.—FORGE AND HEARTH, 30 in. by 42 in. Weight, 250 lbs. With 12-in. patent Fan Blast, Spanners, and 6-in. Emery Wheel, complete on frame with four legs. Fitted with Lever Treadle, Two Travelling Wheels, and Fast and Loose Pulleys for power	£12 12s. 0d.
No. 6.—DITTO DITTO. Weight, 280 lbs. Fitted with all the attachments of Nos. 2 and 4 Forges, but proportionately increased in size. Hood, 30s. extra. Muffler, 42s. extra	£15 15s. 0d.
Rivetter's Hearths, 15 in. by 15 in., 21s. Brazier's Hearths, 15 in. by 15 in., 27s. 6d. Union and Sockets for 1½-in. tube, 12s. 6d. Flexible Tubing, 1½-in., 1s. 6d. per foot.	

PORTABLE FORGES.—By far the most comprehensive and complete arrangement we have ever seen for this purpose is the "Hurricane" Forge. It would appear that the inventor and patentee had foreseen and provided for every contingency which could possibly arise in connection with smithy work in this *multum in parvo* forge. In small compass, and at small cost, the contractor, engineer, boiler-maker, ironmonger, gasfitter, and many other employers of labour have in it an invaluable assistant, whilst to Colonists its companionship is indispensable. We predict for the "Hurricane" Forge unlimited success.

For Drawings, Prices of Larger Sizes, Trade and Export Terms, Testimonials, Agencies, and Licenses to Manufacture apply to—

THE "HURRICANE" PORTABLE FORGE CO.,  
28, NEW BRIDGE STREET, LUDGATE HILL, LONDON, E.C.

BICKFORD'S PATENT  
FOR CONVEYING  
CHARGE IN

Obtained the PRIZE MEDALS at the "ROYAL EXHIBITION" of 1851; at the "INTERNATIONAL EXHIBITION" of 1862 and 1874, in London; at the "IMPERIAL EXPOSITION," held in Paris in 1865; at the "INTERNATIONAL EXPOSITION," in Dublin, 1865; at the "UNIVERSAL EXPOSITION," in Paris, 1867; at the "GREAT INDUSTRIAL EXPOSITION," at Altona, in 1869; TWO MEDALS at the "UNIVERSAL EXHIBITION," Vienna, in 1873; and at the "EXPOSICIONES NACIONAL ARGENTINA," Cordova, South America, 1872.

BICKFORD, SMITH, AND CO., of TUCKINGMILL, CORNWALL; ADELPHI BANK CHAMBERS, SOUTH JOHN STREET, LIVERPOOL; and 85, GRACECHURCH STREET, LONDON, E.C., MANUFACTURERS AND ORIGINAL PATENTEES OF SAFETY FUSE, having been informed that the name of their firm has been attached to fuse not of their manufacture, beg to call the attention of the trade and public to the following announcement:

EVERY COIL OF FUSE MANUFACTURED by them has TWO SEPARATE THREADS PASSING THROUGH THE COLUMN OF GUNPOWDER, and BICKFORD, SMITH, AND CO. CLAIM SUCH TWO SEPARATE THREADS as THEIR TRADE MARK.

WEST OF ENGLAND GUNPOWDER COMPANY,  
SOLE MANUFACTURERS OF THE  
SAPMSON AND LANYON SPORTING GUNPOWDER.  
MR. LANYON, Manager.  
London Offices: St. Michael's House, Cornhill, E.C.

BENNETT'S SAFETY FUSE WORKS,  
ROSKEAR, CAMBORNE, CORNWALL.  
BLASTING FUSE FOR MINING AND ENGINEERING  
PURPOSES

Suitable for Wet or Dry Ground, and effective in Tropical or Polar Climates.

W. BENNETT, having had many years' experience as Chief Engineer with Messrs. Bickford, Smith, and Co., is now enabled to offer Fuse of every variety of his own manufacture, of best quality, and at moderate prices.

Price Lists and Sample Cards may be had on application at the above address.

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THE SANDYCROFT FOUNDRY AND ENGINE WORKS COMPANY (LIMITED).

NEAR CHESTER  
Late the MOLD FOUNDRY COMPANY. Established 1838.

MAKERS OF  
MINING MACHINERY.

CORNISH PUMPING, WINDING, AND EVERY OTHER DESCRIPTI

OF ENGINE,

PITWORK, BOILERS, FORGINGS,

WATER-WHEELS, ORE CRUSHING, STAMPING, AND DRESS

MACHINERY,

GOLD AND SILVER AMALGAMATING MACHINERY,

MINING TOOLS,

ROCK DRILLS, AIR COMPRESSING ENGINES, and all the

necessary accessories for MACHINE BORING.

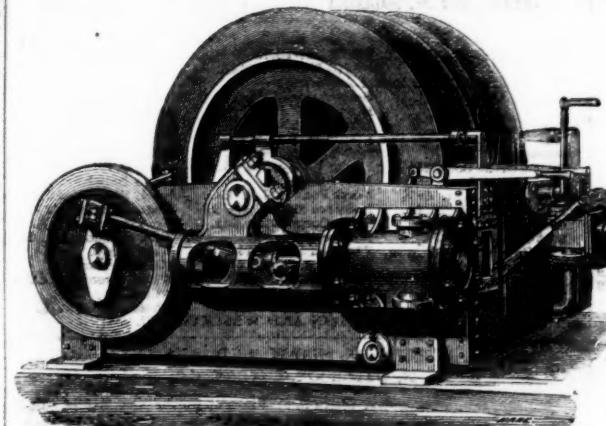
SPECIAL ATTENTION given to MACHINERY for FOREIGN MINES.

SECOND-HAND MINING MACHINERY FOR SALE.

LONDON AGENT—MR. JOHN F. PEARSE,

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CAPTAIN ABSALOM FRANCIS, M.E.,  
GOGINAN, ABERYSTWITH.  
CWM PRYF MINES (LIMITED).—HAS FOR SALE, ONE THOUSAND  
HARES at par, £1.

STEVENS' UNDERGROUND WINDING ENGINE,  
PATENT  
DESIGNED FOR USING COMPRESSED AIR OR STEAM.

## SIMPLE, COMPACT, PORTABLE.

Silver Medal, Royal Cornwall Polytechnic Society, 1876.

No. 1 size, 7 in. single cylinder, with 2 ft. drums.  
No. 2 size, 9 in. single cylinder, 2 ft. 6 in. drums.  
A.—6 in. double cylinder, with 2 ft. 3 in. drums.  
B.—8 in. " " 3 ft. 0 in. drums.  
C.—10 in. " " 3 ft. 6 in. drums.  
D.—12 in. " " 4 ft. 6 in. drums.  
E.—14 in. " " 5 ft. 0 in. drums.

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The List of Applications for Shares will be closed on THURSDAY, the 11th of MARCH.

Issue of 20,000 Preference Shares of £1 each, bearing Interest at the rate of Ten per Cent. per annum, payable half-yearly, with the option of exchanging such Shares into Ordinary Shares of the company at any time within a period of two years at the option of the holder, and 20,000 Ordinary Shares of £1 each.

# The Pierrefitte Mining Company, Limited.

Registered under the Joint Stock Companies Acts of 1862 and 1867, which Limit the Liability of Shareholders to the amount of their shares.

CAPITAL £100,000, IN SHARES OF £1 EACH,

80,000 ORDINARY SHARES AND 20,000 PREFERENCE SHARES.

(The greater part of the latter has already been subscribed for.)

Five Shillings per Share to be paid on Application and Five Shillings on Allotment. The Balance by calls if required, but no Call will exceed Five Shillings per Share, nor be made at intervals of less than Three Months.

SHOULD NO ALLOTMENT BE MADE, THE DEPOSITS WILL BE RETURNED WITHOUT DEDUCTION

DIRECTORS.

Alderman Sir THOMAS DAKIN (Chairman), Cree Church Lane, E.C.  
BUXTON SHILLITOE, Esq., Frederick-place, Old Jewry, E.C.  
WILLIAM STANDING, Esq., Metropolitan Buildings, Queen Victoria-street, E.C.  
WILLIAM GROVER ASHBY, Esq., St. John's-terrace, Hove, Brighton.  
JOSEPH RUTTER, Esq., M.D., Codrington House, Brighton.

Directors of the  
Sentein Mining Company  
(Limited).

BANKERS.

Messrs. DIMSDALE, FOWLER, BARNARD, AND DIMSDALES, 50, Cornhill, E.C.

SOLICITORS.

Messrs. BILLINGHURST AND WOOD, 7, Bucklersbury, E.C.

SECRETARY.

Mr. J. R. COOMBS.

OFFICES—14, GREAT WINCHESTER STREET, E.C.

This company has been formed for the following purposes:—

1.—To purchase several extensive and valuable mining concessions, comprising all metals existing on the property (except iron) in the Arrondissement of Argelès (Hautes Pyrénées), known as the concessions of Pierrefitte, Hear and Gavarne, Palau and Arau, a lignite concession in the Arrondissement of Bagnères de Bigorre, known as the concession of Orignac, a brick earth property and a limestone quarry, with lime kilns, &c., in the Commune of Orignac (Hautes Pyrénées), the total area of these concessions being about 17,500 acres, held in perpetuity from the French Government at a dead rent of about 40/- per annum, and subject to the customary Government Royalty of 5 per cent. on the net profits.

2.—Also the freehold lands of about 10 acres, dwelling houses, offices, extensive miners' barrack, smithy, and other buildings and erections, rights, waterways, easements, tools, mineral extracted (about 10,000 tons), wire rope tramway, furniture, &c., &c., belonging to a company which was formerly engaged in working one mine on the concession near the town of Pierrefitte-Nestalas, and commonly called the mine of Coutras Mountain, well known to all travellers in the Pyrénées, as it forms a conspicuous object from the high road shortly after leaving Pierrefitte for Cauterets.

There are upwards of 47 known lodes in these concessions, which show promise of great value, many of which yield silver-lead ore of an exceedingly rich quality, while the deposit of lignite, extending over 1000 acres, near Bagnères de Bigorre will become very valuable to the company should they hereafter elect to smelt their own ores, a new process for coking lignite having lately rendered it a very important fuel.

Owing to the lengthened depression of the metal market, and to complications consequent on the death of the late proprietor, the directors and a few friends secured these large concessions for a sum of £10,500, of which £6500 has been paid, and the payment of a further sum of £4000 to be spread over a period of three years if desired. They are, however, assured that the property is of very large value, and on a careful examination by competent miners and mining engineers, it has been discovered that at one mine alone, close to the Pierrefitte-Nestalas Railway Station, upwards of 10,000 tons of rich silver-lead ore are mixed with blonde (which, according to the assay of Dr. Morgan, of Swansea, and others, will yield, when dressed fully, £40,000 at present prices), has been thrown aside, the former workers having no apparatus for dressing the ore. They are also assured that a large quantity of silver-lead ore, worth £20 per ton, can be raised and handpicked from the mine daily, and made marketable without dressing.

The property could now be sold, it is believed, at a very large profit, but the directors and their friends who joined them in the purchase have determined to retain their interest and to associate themselves as a company under the Limited Liability Act, with a capital of £100,000, taking their profits entirely in ordinary shares, and only issuing such additional shares as may be necessary to provide for repayment of the moneys expended and a sufficient sum for working capital. The price of these valuable concessions has been fixed at £70,500, of which £4000, as stated above, will remain to be paid by three yearly instalments, with interest at the rate of 5 per cent. per annum; £6500 will be paid in cash, and the balance of £60,000 in ordinary shares, to be allotted in accordance with the terms of the contracts hereafter mentioned, and receiving no dividend until 20 per cent. has been paid on the preference shares. The remainder of the share capital, viz., £40,000, divided into 20,000 preference and 20,000 ordinary shares, is now proposed to be issued in order to provide for the cash payment in respect of the purchase and to obtain the necessary working capital.

The directors propose to erect without delay extensive dressing-floors at Pierrefitte, where there is a never-falling and abundant supply of water-power for all purposes, on a convenient plot of freehold land of about eight acres, the property of the company capable of treating 100 tons of ore daily, which will place them in a position to make very large returns of ore, and to declare dividends within a comparatively short time. At the same time, mining operations will be proceeded with, and by a cross-cut of some 20 fathoms an entirely new mine will be opened underneath the present rich levels with upwards of 50 fathoms of backs in virgin ground, and notwithstanding the proverbial uncertainties of mining, it is confidently believed that this one mine alone, omitting the consideration of the rest of these valuable concessions, will rapidly repay the whole of the capital embarked in this undertaking, the quantity of ore to be raised being limited only by the number of miners employed. The question of working or otherwise dealing, by sale or lease, with the remainder of the property will remain to be decided by the company hereafter.

An important smelting company, whose works are distant about 150 miles by rail from Pierrefitte Station (which is 2 miles from the mine), has proposed to take the total yield of silver-lead ore from this mine, delivered at Pierrefitte Station.

The cost of transit from Pierrefitte to Swansea would be under 30s. per ton, and the facilities for shipment from Bordeaux to Wales, Cornwall, Newcastle, Liverpool and London are abundant.

A report by Mr. John Lean, M.E., whose probity and experience are a guarantee for its trustworthiness, together with the result of the assays of the ore by Dr. Morgan, is appended.

The following statement, as certified by Mr. Lean, shows the probable results of working the Pierrefitte Mine, and the profit to be derived therefrom:—

RETURNS.

50 miners will raise daily 4 tons of silver-lead ore of (say) 70 per cent., worth at present prices at least £20 per ton, calculating 25 working days in the month, will show a monthly yield of 100 tons, and a return of £2,000 0 0

35 tons of second quality ore mixed with blonde, showing a yield of 87 tons of ore, or of 200 tons of silver-lead ore when dressed, per month, worth at present prices £12 per ton, or a return of 250 tons of blonde, or the ores of zinc, at £4 per ton, equal to £1,000 0 0

Total monthly yield £5,400 0 0

Registration of New Companies.

The following joint-stock companies have been duly registered:—

EMPIRE GOLD MINING COMPANY (Limited).—Capital 250,000, in shares of 2s. To carry out an agreement made between J. R. Burrows and F. Andrews of the one part and W. Dunlop of the other part, to purchase and work certain mines, veins, lodes of minerals situate in Summit mining district, Rio Grande county, State of Colorado, United States, known as the Empire Lead, with power to acquire any other mining properties and rights; to erect machinery, furnaces, mills, and other appliances for smelting, refining, crushing, or otherwise dressing the ores and minerals. The subscribers (who take one share each) are—W. H. Merricks, 4, Addison Gardens North, gentleman; E. H. Bayldon, 2, Norland-place, stockbroker; G. Potter, Gunnersbury, stockdealer; J. Neubercott, South Norwood, stockbroker; P. Postlewhite, Shepherd's Bush, sharedealer; A. L. Edwards, North Finchley, stockbroker; E. J. Dowlen, 107, Isledon-road, lead smelter.

THE PENARTH IRON AND STEEL COMPANY (Limited).—Capital 50,000, in shares of 50s. To manufacture for sale ores, minerals, and

metals of all descriptions. The subscribers (who take one share each) are—F. Monks, Warrington; C. C. Dunkerley, Manchester; T. Hall, jun., Warrington; W. Fletcher, Whitley; J. Fimlott, Burley; J. H. Knowles, Cwmbran; B. Wallace, Cwmbran.

THE KING'S LYNN COFFEE TAVERN COMPANY (Limited).—Capital 5000l., in shares of 12. To carry on the business of a coffee tavern company in all its branches. The subscribers are—F. J. C. Barker, King's Lynn, 50; C. H. Ayl, King's Lynn, 25; J. T. Cook, King's Lynn, 20; H. A. Leake, King's Lynn, 50; W. Thompson, King's Lynn, 20; H. Wenright, King's Lynn, 10; W. Hitchcock, Gaywood, 20.

THE LEAMINGTON AND WARWICK TRAMWAYS AND OMNIBUS COMPANY (Limited).—Capital 25,000l., in shares of 10l. To construct, maintain, and work tramways and omnibuses. The subscribers are—J. Watts, Birmingham, 20; E. Pritchard, Birmingham, 20; J. Gilbert, Birmingham, 20; R. S. Gold, Warwick, 20; J. Woodward, Leamington, 20; E. Carter, Birmingham, 5; E. H. Carter, Birmingham, 5.

THE CANADIAN SALMON COMPANY (Limited).—Capital 50,000l., in shares of 50s. To carry on the business of preparing and exporting fish, poultry, and other food produce. The subscribers are—

J. Draper, 22, Great Winchester-street, 10; E. Phillips, Reading, 3; W. M. Wilkinson, 44, Lincoln's Inn-fields, 3; H. Leslie, 1, Frederick-place, 3; W. C. Davis, 30, Milk-street, 3; H. W. King, Beckenham, 3; A. Macdougall, St. John, New Brunswick, 3.

THE OLDHAM JOINT-STOCK BANK (Limited).—Capital 500,000l., in shares of 25l. To carry on the business of bankers in all its branches. The subscribers (who take 10 shares each) are—J. Clegg, High Crompton; W. Lees, Oldham; W. F. Milner, Oldham; J. Lees, Oldham; J. M. Cheetham, Manchester; J. T. Clegg, High Crompton; A. Crompton, Oldham; J. Crompton, High Crompton; A. Mellor, Rochester; W. Wrigby, Oldham; J. W. Clegg, Oldham; E. Collinge, Oldham; J. Taylor, Oldham.

LYNN AND TONDU COMPANY (Limited).—Capital 258,000l., in 17,200 preference shares of 5l., and 8600 ordinary shares of 20l. To carry out an agreement for the purchase of the liquidation of Llynn and Tondu and Ogmore Coal and Iron Company (Limited), upon terms sanctioned by the Court of Chancery. To purchase or otherwise acquire any other coal, iron, and other mines, minerals, &c. To carry on the business of coal and ironmasters, smelters, engineers, ironfounders, and contractors for coal, coke, iron, or ironwork in all the branches of such business. To make and sell railway and other

WORKING COST.	
20 miners, including materials, at £6 per man per month	£480 0 0
25 mechanics, trammers, and labourers (say)	100 0 0
Carriage of 975 tons of ore from the mine to the dressing-floor per month at (say) 2s. per ton	97 10 0
Dressing 875 tons of ore per month at (say) 4s. per ton	175 0 0
Timber, coal, iron, stores, &c. (say)	200 0 0
Management at the mine, including chief mining captain, dresser, assayer, clerk, &c. (say)	85 0 0
Carriage of 320 tons of ore from dressing-floor to Bordeaux, and freight thence to England, at 30s. per ton	480 0 0
Carriage of 250 tons of blonde to Bordeaux and freight thence to England, at 25s. per ton	312 10 0
London expenses, including directors' remuneration, secretary's salary, office expenses, &c.	70 0 0
Incidentals, including taxes, travelling expenses, &c. &c.	50 0 0
	2,080 0 0
Net profit per month	£3,320 0 0

Or £39,840 per annum, equivalent to a yearly dividend of nearly 40 per cent. on the capital of the company, by the work of 50 miners only, whereas by increasing the number of men it is confidently believed that the profit to be realised from working this mine alone will greatly exceed the above estimates.

The only contracts entered into are as follows:—(1.) An Agreement signed in

Paris, dated the 15th day of October, 1879, made between Alfred Long Jeffree

and the representatives of the late Marquis de Querriau and of the Compagnie

Royale Asturienne.—(2.) Articles of Agreement dated the 11th day of November, 1879, between Alfred Long Jeffree, of the one part, and Sir Thomas Dakin, Buxton Shillitoe, Joseph Rutter, William Grover Ashby, William Munton Bullivant, William Standing, William Wadham, Arthur Robert Marten, Harry Povall, Bellamy Smith, Thomas Parker Caldicott, and James Robert Coombs, of the other part.—(3.) Purchase Contract or Conveyance dated the 15th day of November, 1879, made between the Marquis de Querriau and Prince Rohan de Hochefort, of the one part, and Alfred Long Jeffree, Sir Thomas Dakin, Buxton Shillitoe, and William Standing, of the other part.—(4.) Another Purchase Contract or Conveyance dated the 18th day of November, 1879, made between the Compagnie Royale Asturienne, of the one part, and Alfred Long Jeffree, Sir Thomas Dakin, Buxton Shillitoe, and William Standing, of the other part.—And (5.) An Agreement dated the 2nd day of February, 1880, made between the said Alfred Long Jeffree, Sir Thomas Dakin, Buxton Shillitoe, and William Standing, for and on behalf of themselves and the other parties interested, of the one part, and the said James Robert Coombs as a trustee for and on behalf of the company, of the other part. The agreements numbered 2 and 5 have been filed with the Registrar of Joint Stock Companies, and copies of any of the documents and the Articles of Association can be inspected on application to the solicitors of the company.

Prospectuses and reports, with plans of the various concessions, and forms of application for shares, may be had of the bankers, solicitors, and secretary, and samples of the ore may be seen at the offices of the company.

Dated 25th day of February, 1880.

PIERREFITTE SILVER-LEAD AND BLONDE MINE.

GENTLEMEN.—This valuable mine, and the other properties thereto belonging, I carefully and thoroughly inspected on the 25th ult. The mine is situated on a spur of the Pyrenees, rising from the beautiful picturesque town of Pierrefitte, located in a fertile luxuriant valley of said mountain chain. The direction of the main lode is parallel with the rise of the mountain—about west by north. Its back, being denuded of covering matter, can be traced, and is most conspicuously seen for a considerable distance up the mountain ridge. It is of gigantic width and strength, retaining its dimensions to the bottom of the mine, and is capable of yielding 8, 8, and in places 10 or more tons of silver-lead ore and blonde to the fathom.

The mine has been opened, or its levels and excavations extended, to a length of upwards of 100 fms., but only to a depth of about 25 fms. reckoned on the incline of the lode, the immediate bottom being the richest part. The mine was worked during a period of only six years, and I was informed that 10,000 tons of ore, picked or culled, but without having undergone any process of cleansing, was, within this comparatively short time, sent from the mine to the smelting furnaces; that a truck of 10 tons was daily despatched, and that such were the facilities of transit, that in 48 hours from the ore leaving the mine it was undergoing the process of smelting.

At the end or terminus of the wire rope, which is at the main road leading to and from Pierrefitte, I compute that there is now lying 4000 tons of lead and zinc ore, and at respective stations of the rope, up at the mine, I should say that there is the united quantity of 6000 tons, making together an entire quantity of lead ore and blonde of 10,000 tons, now ready and waiting to be utilised, to be crushed and cleansed for market. These ores I should estimate to yield at least 2000 tons of lead ore and 4000 tons of blonde, and which, together, even at the present price, should be worth at least £40,000. For the reduction and preparation of these ores for market crushing and dressing appliances will have to be erected.

Wishing rather to be under than over in my calculation of the extracted lead ore, I have called it, as you see, 2000 tons, and its value at £12 a ton = £24,000, allowing £4 a ton for the blonde, but when I tell you that 5 samples of the ore, analysed in my presence, gave of metallic lead an average of 60 per cent., and of silver 55 ozs. to the ton of ore, you will not fail to think that it appears evident that my estimate is too low.

Everything on the mine having been left in working order, and the well-built, capacious, and convenient houses, of which there are several, all in perfect condition, tramways, and so on, evince, even were there no other data, the suddenness with which the miners ceased to work, and which was about two years ago. From appearances it would seem as though they had dropped their tools, at once

left the mine, and went home, leaving three men in charge of the property, and who are still there.

To cease to work such a mine in such a way would seem to be unprecedented; but the following is stated to be the cause of this extraordinary act:—It—that is, the mine—was held and worked by a company on lease, but contemplating the laying out of a large sum in the erection of an extensive dressing-floor, wished to purchase it; their offers were, however, refused, consequently they declined to continue their lease, involving a royalty of 20 per cent. on the gross returns of the lead, and of 15 per cent. on the blonde.

On the resumption of the working of the mine, the quantity of ore to be extracted would seem to depend upon the number of miners employed.

In the concession, which has an area of about 20 square kilometres, or over 12 square miles, there are other lodes, one of which is of great promise, and, as a part of the property, there is a piece (10 acres) of fertile freehold land adjacent to the town of Pierrefitte, and which was purchased by the workers of the mine, with the intention of erecting on it the necessary dressing apparatus, for which purpose the preliminaries were begun, but, from appearances, were no less abruptly abandoned than the mine itself. Instead, however, of erecting dressing machinery on the land, and of laying it out for the purpose designed, I think it probable that the dressing-floor, with the necessary adjuncts, may be conveniently laid out and fixed at the bottom or terminus of the wire rope—adjacent to which there are two sources whence an abundant and never-failing supply of water, suitable and sufficient for all purposes can at easy cost be obtained—the place intended for them, as before described, by the former workers of the mine, being somewhat distant from it. The wire rope, which is still securely fixed to its place as when in use, can, with trifling repairs, be made capable of conveying down from the mine 10 or 15 tons a day, but with a new and larger one up to 100 tons could be sent down.

It is seldom, indeed, that during my long course of mining experience, I have seen such a mine as the Pierrefitte Mine offered for sale, and I hesitate not to say that, in my opinion, it is a most valuable property—a property the acquisition of which is much to be desired, and which by proper and active working, will, I fully believe, answer the highest reasonable expectation of whoever may invest his money therein. Looking at the great width and strength of the lode, at its hard, close, compact nature, and at the infantile state of the mine as to depth, it may reasonably be inferred that no living man will see its exhaustion. The distance of the mine from the Pierrefitte Station of the Paris and Bordeaux Railway is about two miles, and the expense of carriage will not exceed 2s. 6d. a ton. From Bordeaux to Liverpool, freight 12s. to 12s. 6d. a ton, making a total cost, per ton (from the mine to Liverpool) 3s. From the mine to Swansea 5s. less.

JOHN LEAN, M.E.

To the Directors of the Pierrefitte Mining Company (Limited).

plant, fittings, machinery, and rolling stock, &c. The subscribers (who take one share each) are—F. Braby, Deptford, ironfounder; J. J. Smith, 90, Cannon-street, director; J. Huish, Derby, J.P.; W. Gordon, 11, Leinster-gardens, M.P.; E. Barchard, Duddleswell, ironmaster; H. Bucker, 12, Great Tower-street, broker; W. H. Daunt, 11, Queen Victoria-street, metal merchant; H. Brogden, 52, Queen Victoria-street, colliery proprietor. The first directors are Messrs. Braby, Smith, Huish, Gordon, Barchard, Bucker, Daunt, Brogden, and D. Chadwick, M.P. Qualification, 1000.

**BRIERCLIFFE MILL COMPANY (Limited).**—Capital 20,000*l.*, in shares of 10*l.* To carry on the manufacture of cotton cloth, weaving, &c. The subscribers (who take five shares each) are—J. Banks, Briercliffe; J. Bancroft, Burnley; N. Nuttall, Burnley; E. Atkinson, Marsden; W. Brierley, Burnley; W. Brierley, jun., Burnley; T. Taylor, Briercliffe.

**BETTS AND COMPANY (Limited).**—Capital 160,000*l.*, in shares of 50*l.* To carry on in the United Kingdom and elsewhere the manufacture and sale of metallic and other capsules for bottles, and concerning engines and other appliances. The subscribers (who take one share each) are—W. Betts, Wharf-road; W. H. Betts, Wharf-road; A. H. Macnaghton, Hampstead; A. Maclean, Aldershot; A. M. Betts, Hayham Hall; P. C. Betts, Hayham Hall; C. Cheswright, 1, Wharf-road.

#### WATSON BROTHERS' MINING CIRCULAR.

**WATSON BROTHERS,**  
**MINEOWNERS, STOCK AND SHARE DEALERS, &c**  
**1, ST. MICHAEL'S ALLEY, CORNHILL, LONDON.**

The ore at Crebor—525 tons—weighed off 528 tons. The lode in the 120 east is 18 to 20 ft. wide, and the "stull" referred to in the report is a sort of wooden framework to support the roof of the level and protect the men at work in the end. While engaged putting in this protection, which might occupy ten days, the end at the 120 was of course stopped, as both works could not be carried on together, and the values of the end and of the stope above were, as the agent stated, "as last reported."

Polrose shaft, we should think, would be down to the 90 in about two months, and between the 80 and the 90 the Margaret lode, it is expected, will be in the shaft, which was sunk on the course of the Polrose lode to the 50, and then perpendicularly. Above the 50 Polrose yielded 320 tons of tin, which sold for 11,584*l.* Then Margaret lode crossed the shaft, heaved Polrose to the north, and caused a run in the tin ground at that level and the 40. It is the opinion of all those who have seen the mine, surrounded as it is by some of the richest tin mines in Cornwall, that great deposits of tin will be found in depth, and we would ourselves rather see the shaft got down with all possible speed (the ground is very easy) than to be rising to the tin ground in the run above. The company have ample capital in hand, and a good lode in the shaft might send shares to double their present price. Our correspondent, therefore, who says he is not a mere speculator in shares, should hold on.

The market price of a share is regulated by supply and demand, and of course "bullying" and "bearing" have a great deal to do with it. If selling predominate over buying orders the market quotations are lower, and often merely nominal.

The directors of the Prince Patrick are issuing 4000 preference shares at a premium of 10*l.* per share, 17*l.* paid. This will make the preference shares 12,000, and make up the working capital 4195*l.* with 7000*l.* of calls to make if required. In the 12 months ending Dec. 31, the mine sold lead ores for 6363*l.* 15*s.* 9*d.*, and after paying 10 per cent. on 8000 preference shares, and 10 per cent. on 18,000 ordinary shares (1100*l.*), there was a balance in hand of the sum of 2845*l.* 16*s.* 9*d.* Out of this on Jan. 26 a dividend at the rate of 15 per cent. on the whole of the paid-up share capital was declared, leaving 1195*l.* 16*s.* 9*d.* in hand. With the money now raised on the issue of 4000 preference shares at a premium of 10*l.* the directors, we understand, intend to open and develop the ground at Hughes' shaft, Gerard's shaft, and the east and west or "Pant" lode recently discovered, and which, with other points of importance, they consider will add considerably to the value of the mine.

In driving the deep adit cross-cut north at the Prince of Wales, a branch 1 ft. wide has been met with, composed of quartz, capel mundic, and spotted with yellow copper ore.

It will be seen by the notice calling the Crebor meeting that a resolution will be proposed to make the shares 12,000*l.*—that is, just doubling them.

Since our remarks on Polrose were written the mine has been thoroughly examined and inspected, and while the productiveness of the Polrose lode above the 50 is confirmed, the agent writes:—"The lode at the 80 (Margaret lode) for several fathoms is of a strong and masterly character, more settled, and presenting a more favourable appearance than at the levels above. We consider the prospects at the 90 to be unexceptionally good."

The agent at Parys seems to be getting into the main lode at the 90, for it is now worth 3 tons of copper ore and 2 tons of sulphur per fathom, and daily improving.

**M. R. WILLIAM H. H. WATSON, DEALER in RAILWAY STOCKS and MINING SHARES at net market prices of the day.**

A few months ago W. H. H. W. called particular attention to Wheal Crebor, and supplied his clients with them at 5*s.* to 10*s.* each. He would now call attention to POLROSE MINE, in which there may be a great rise in a few months. Shares are now £2*1* 1*2*, £2*2*.

Address: W. H. H. WATSON, 1, ST. MICHAEL'S ALLEY, CORNHILL, LONDON, E.C.

**GOLD RUN HYDRAULIC GOLD MINING COMPANY (Limited).**—We understand that the committee appointed for the reconstruction of this company have been very successful in their task, and that the new company, which is now registered under the title of the New Gold Run Company (Limited), has received the greatest support both from the share-holders and debenture-holders. The gentlemen who have hitherto acted as the committee have been appointed the first directors, and we understand it is their intention to proceed with the erection of a mill at the earliest possible moment. We, therefore, trust that the shareholders will soon reap the reward of their patience. All reports speak of the mine as very rich in gold.

**VIRNERBERG COPPER.**—A parcel of upwards of 300 tons of copper leaves for Swansea this week. The returns for February were about 99 tons; the quantity is less, owing to a rearrangement of the dressing, by which an increased percentage of copper is obtained. The underground bargains remain much as usual, and another parcel is well forward. The setting report is given in the usual column.

**ENGLISH-AUSTRALIAN GOLD MINE.**—The advices received by the mail this week are most favourable, the quality of the quartz being better, and the quantity of gold returned equal to double the previous month. The prospects of the mine are exceedingly good, and seeing that the returns have considerably increased in the last six months, and continue to do so, that the adjoining mine on the same run of quartz has long been paying good dividends, and that gold mining is beginning to attract special attention, the shares of this company should be a good investment. There are only 20,000 of 1*l.* each, and about 2000 preference shares of 1*l.* each.

**PANDORA.**—At the meeting, on Thursday, it was stated that the credit balance at that date was about 900*l.* The sales for 12 months embraced in the accounts amounted to about 2428*l.*, against only 1478*l.* in the previous year, although the price of lead for 1878—79 was lower than 1877—78. The mine, which is only 33 fms. deep,

has already returned ores of the value of upwards of 15,000*l.* The shaft is now being deepened and levels driven out, and there appears every reason to anticipate a realisation of the promise held out in the agent's report that "with a regular and progressive development of the mine, and the prices now obtainable for ore, I venture to say we shall be able to make a considerable profit on this year's working."

**WEST KITTY.**—We are informed that the West Kitty meeting of shareholders will be held on the 18th inst. The accounts will show well. The balance of receipts over expenditure will be nearly 200*l.*, and all labour cost and merchants' bills paid close up to the latest date. The mine continues to improve, and we have reason to expect, therefore, that the meeting will be of a more than ordinarily successful character.

**BRITISH LEAD MINES.**—Mr. Murchison is preparing a new edition of his valuable work on this subject, which will be of great use at the present time.

**PLYNLIMMON.**—It will be seen by an advertisement in another column that this valuable lead mine is offered for sale by the mortgagees. Though only 35 fathoms deep, nearly 40,000*l.* worth of ore has been returned, and a large quantity left in the ground opened. There is a good plant of machinery, &c., and the prospects for deeper levels are exceedingly good.

**LADY BERTHA UNITED MINE.**—The shareholders will be pleased to hear that operations have commenced at these mines. No time will be lost in erecting the waterwheel and necessary machinery for draining the mine to its present bottom, the 53 fathoms level.

**UNITED VAN CONSOLS AND GLYN.**—Amongst the many shares recommended it appears strange that United Van Consols and Glyn has been overlooked. Under the mismanagement of the late secretary the shares (Van Consols) were as high as 7*l.*, and Glyn 5*l.*, and now the two being amalgamated, and pecuniary matters put straight, the price is quoted 4*l.* to 1. If rightly informed, the mines (or accurately writing they should be described as one) are improving, for I observe that Capt. Roach, reporting on the 14th ult., amongst other features mentions the forebay in the 50, west of Murray's shaft, as producing very fine stones of lead, and expecting good results. On the 25th ult. he states that in the same level west of Murray's it is worth 12*l.* per fathom, evidently showing a gradual improvement; whilst other recent indirect information states it is now almost solid lead, and likely to increase in depth, and further, that the north cross-course is approaching that part of Van which proved valuable. I am informed, and I hope correctly, that local and influential parties have recently been buying, thus availling themselves of what has escaped the notice of some quondam shareholders. I would advise any who might buy to make it a stipulation that the transfer was at once executed by an immediate delivery of the shares, and to insist distinctly on this being carried out.—ALPHA.

**DEVON COPPER AND BLENDÉ COMPANY.**—We hear that this company is in treaty with a large firm for the sale of all their blendé at a fixed price. The price of blendé now is 5*l.* 12*s.* 6*d.* per ton. When the mine stopped and the engine burst it was only about 1*l.* per ton. **EAST ROMAN GRAVELS.**—The manager reports that he will be ready next week to commence sinking in the 75 south on a lode worth from 2 to 3 tons of lead ore and blendé per fathom.

**SOUTH PENSTRUTHAL.**—The committee have this week purchased an excellent 60 in. pumping engine, and no time will be lost in its erection, and in getting the mine in full working order.

**DEVON COPPER AND BLENDÉ MINING COMPANY.**—The shares of this company have been so rapidly taken up by the miners and residents of the neighbourhood that the directors have determined to make an allotment on March 11, instead of March 17, as previously arranged.

**WEST DEVON GREAT CONSOLS.**—This property has been inspected this week for some influential members of the Stock Exchange, and it is understood most favourable opinions have been expressed in reference to it. The shares steadily advance on buying orders, and there seems to be a pretty unanimous opinion that much higher prices will be reached. There is little doubt that the character of the lode now being worked is altogether different to anything hitherto seen, and importance is attached to the fact that the depth where this discovery is identical with the depth and circumstances attending the great discovery of copper at Devon Consols adjoining.

**FORTESCUE (STANNAGWYN) MINE.**—The recent discovery of mineral has been marked by the removal of Capt. H. B. Harris from Graystone and East Longstone Mines, near Launceston, to take the resident agency at Fortescue. Capt. Harris is an old and experienced miner, and who having worked in the district some years ago has expressed a very high opinion of the mine.

**FLAGSTAFF.**—We regret the brief notice of the action, Pearson v. Snell, in last week's Journal, contained an error, which requires correction. It appears that in October, 1878, the defendant, in reply to a circular of the plaintiff's, issued one to his co-debenture holders, which imputed to the plaintiff that he was not a proper person to act as trustee for the debenture holders. Mr. Justice Denman having suggested it was a matter which should be settled by arrangement, the counsel on both sides had a private interview with his lordship, which resulted not in any apology being made, as stated in our last Journal, but in each party withdrawing all imputations made against the other, and the withdrawal of a juror, or, in other words, each party paying his own costs.

**GOLD MINING MANIA.**—All the signs begin to point to a big mania, of which gold mining will be the centre and support. Many months ago we gave, in reply to inquiries from correspondents, a cautiously favourable answer to questions about the South Indian Gold Mining Company. It seemed to us that the evidence to hand warranted the belief that enough of gold existed in Southern India to justify the constitution of mining companies. We deprecated judging of the capacities of any mining district by mere specimens, however rich they were, and pointed out some of the difficulties in the way of successful enterprise of the sort. Since that time the evidence has been greatly strengthened. We have had an abstract of the results of the special inquiries of Mr. Brough Smyth—a mining engineer of character, and of much experience gained in Australia—which represent the Wynaad district of Madras as of a highly afferous character. We have had a general confirmation of the accuracy of Mr. Smyth's conclusions by the Under Secretary's statement in the House of Commons on Friday evening last. The report of the Indian Government's mining engineer is to the same effect as the statement telegraphed from Calcutta to the Times, and Mr. Stanhope has promised to lay portions of the report on the table of the House. It is to be remembered that although the news of gold discoveries in India has come suddenly upon the public, it is not quite so recent as most people assume. In November, 1878, Mr. Brough Smyth gave a favourable analysis of samples to the Indian Government. The year before that a mining engineer dispatched to the South Wynaad by W. Nicol and Co., of Bombay—a firm disastrously associated with the City of Glasgow Bank—gave glowing accounts of the result; and ever since that time some shrewd long-headed men in the North have had their eye on the district. A company was, indeed, formed to work a property adjoining those now acquired by the South Indian and Glenrock Companies, and the shares are, we understand, firmly held by Scotchmen. The City of Glasgow Bank crash prevented the more prompt prosecution of the enterprise; but the shareholders of that doomed institution will, perhaps, yet have some benefit from the mining property of their debtor, as certain contingent rights have been reserved to them which may become valuable if the Wynaad prove as rich in gold as is expected. Everything seems to portend such a result, and the consequent development of a large gold mining interest in Southern India. We have numerous limited companies already in the field, and there are sure to be many more. As a sign of the interest which is now being felt in the subject it may be stated that, for the shares of the latest comer, the Indian Glenrock Gold-Mining Company, which, with a capital of 100,000*l.* in 100,000 shares of 1*l.* each, offered 67,000 shares for public subscription, there were more than five times that number of applications on the day after the prospectus was issued; and it has been stated in restraint of the ardour of would-be subscribers that no further applications can be

entertained. The situation is thus becoming one of lively interest, but also of practical peril, because of the attendant excitement. It is the whole world of further gold supplies at the present time. We are at the opening of a new cycle of commercial and trading activity, order to its full development, larger amounts of gold than are now available. It was the concurrence of the gold discoveries in California and Australia more than a generation ago with the growth of the railway enterprise, which has mainly caused the enormous expansion of the world's trade during the past quarter of a century. Now that gold is the sole standard of value in so many countries, the existing supply is not adequate even for present wants, and a supplementary supply from India, or anywhere else, would provide the one thing needed to give fresh and enormous impetus to enterprise and credit. While all countries would benefit, India of course would reap special advantages.—*The World.*

**WEST PATELEY.**—Further important improvements have taken place during the week. In the 67, north-west upon the new vein, a feeder of gossan, with stones of ore, has been met with; here a discovery may shortly be looked for. The 56 fm. level, upon the same lode, continues a rich course of ore, the vein widening and increasing in value. There are now in the end solid branches of lead ore, worth upwards of 3*l.* tons per fathom. In the south-west cross-cut, approaching the series of rich veins, a favourable change in the character of the ground has taken place, with indications that one of these productive veins is near at hand. The manager writes that, "on the whole, I consider our prospects at the principal points of operation very encouraging." The returns for the month are estimated at 40 tons of lead ore.

**WEST PHOENIX.**—This is the only new mine started in the Canadian district since the revival, and it has every prospect of becoming one of the most valuable young mines on its merits brought out for a long period. Shareholders should not forget that it adjoins Phoenix United, now selling for 70,000*l.*, and returning 50 tons of tin monthly, in addition to copper. It has the same great champion lode running through its entire length, and every fathom of ground from the new engine-shaft just commenced to the western end in Phoenix is known to be valuable. Considerable importance is attached to the intersection of the lode at this shaft, as from the immense gossan banks recently opened on a good discovery is confidently looked for. Locally the mine is thought very highly of, and large numbers of shares have been taken, notably by mine agents. An engine has been purchased, and will be erected at once. Shares are firmly held.

#### VAN MINES—MONTHLY REPORT.

**March 4.**—As under please find my monthly report upon this mine. The 120 west is driven 4*l* fms. west of the 60 winze. The end of the level shows a strong lode, intermixed with lead and blendé, but not sufficient to value; letting out much water. The cross-cut south in the 120, at a point 45 fms. west of shaft, is driven 19 ft., but has not yet reached the hanging-wall; still producing patches of lead at times. In the 105 west, where we are stripping down the lode to the full width, it is worth 1*l* ton of lead ore on the average per cubic fathom. The two stope in the back of this level are on the average 16 ft. 6 in. wide, and worth 2*l* tons of lead ore per cubic fathom. The lode in the intermediate level in the back of the 105 is worth 1*l* ton of lead ore per cubic fm. The cross-cut north at the present end of the 90 west has been driven 5*l* fms., but has not yet reached the footwall; letting out a little water in the forepart. For the first 8 or 9 fms. crossing we cut some nice strings of lead, and good patches occasionally since. The stope in the back of the 90 are on the average 20 ft. wide, and worth 1*l* ton of lead per cubic fathom. The stope in the back of the 75 (four in number) will average 25 ft. wide, and will produce 23 cwt. of lead ore per cubic fathom. The stope in the back of the 60 (three in number) will average 15 ft. 6 in. wide, and worth 1*l* cwt. of lead ore per cubic fathom. The 30 fm. level stopes are on the average 15 ft. 6 in. wide, and worth 1*l* cwt. of lead ore per cubic fathom. At the trial cross-cut in the 30 west we drove 8*l* fms. upon the leader or branch, but discovered nothing of value as yet.—*Edward's Shaft:* The rise in the back of the 45 having been communicated with Edward's shaft the men are now engaged in stripping down the rise, and timbering the shaft to the full size.—*North Lode:* The cross-cut intersecting this lode is driven 5 fms.—*Surface:* Everything at the surface is progressing satisfactorily. The machinery is in good working order. Our monthly sale takes place to-day; the quantities are 200 tons of lead and 75 tons of blendé.—*W. H. WILLIAMS.*

**SOUTH INDIAN GOLD MINES.**—The rush for the shares of the Indian Glenrock Gold Mining Company may well be termed a "yellow fever." Crowds of people waited at the London and County Bank to present their forms of application, and the scene of excitement continued the whole of Monday. The prospectuses containing the necessary form of application for shares were sold for 5*s.* and 10*s.* each.—*City Press.*

The Chapel House Colliery annual meeting was held at the colliery on Thursday last. The Chairman presided. The report and accounts were passed and adopted. The particulars of the meeting will appear in our next issue.

**EPF'S COCOA—GRATEFUL AND COMFORTING.**—"By a thorough knowledge of the natural laws which govern the operations of digestion and nutrition, and by a careful application of the fine properties of well-selected cocoas, Mr. Epf's has provided our breakfast tables with a delicately flavoured beverage which may save us many heavy doctors' bills." It is by the judicious use of such articles of diet that a constitution may be gradually built up until strong enough to resist every tendency to disease. Hundreds of subtle maladies are floating around us ready to attack wherever there is a weak point. We may escape many a fatal shaft by keeping ourselves well fortified with pure blood and a properly nourished frame.—*Civil Service Gazette.*—Sold only in packets labelled—"JAMES EPF'S CO., Homoeopathic Chemists, London."

#### THE COPPER TRADE.

**Messrs. HENRY R. MERTON and Co. (Leadenhall-street, March 1)**  
Issue the following Statistics of Copper:—

Stocks in Europe	
Chili ores and regulus, Liverpool	25,317
Chili bars in Liverpool	4,316
Chili ingots in Liverpool	59
Foreign copper (chiefly Australian) in London	4,055
Foreign copper	200
English copper in London	59
Chili bars and ingots and barilla in Havre (estimated)	3,022
Other copper in Havre	159
Stocks of copper contained in other foreign ore and Spanish precipitate (fine)	731
Afloat, and chartered from Chili to Europe (advised by mail)	
Ore and regulus (equal to fine)	2,374
Bars and ingots	9,379
By cable, ores and regulus (fine)	1,258
Bars and ingots	6,150
Afloat from Australia (advised by mail)	
Fine copper	1,825
By cable: Fine copper	1

several realisations of profits, has brought about the late decline, the market closing steady. Consumption continues active and the American demand is as brisk as ever. Banco has been in good request, the price declining from 59½ fls. to 55½ fls., then again advancing to 57 fls., from which there was a fall to 55½ fls., which is our closing quotation. Contracts for delivery ex March and May sale, which are now closed, stand at 57 fls., above the price ruling for cash parcels. Billiton with moderate demand; the price fell from 59 fls. to 55 fls., subsequently advancing to 57 fls. With more offering the price again declined to 55½ fls., at which figure there are now buyers. Forward deliveries have been in good demand on speculative account: 13,000 peculs Billiton offered in public sale at Batavia on the 9th inst., fetched the average price of 63½ fls., costing to sell here about 56½ fls., per pecul. The ensuing sale, comprising the same quantity, will be held on April 12.

The position of Banco in Holland on Feb. 28, according to the official Returns of the Dutch Trading Company, was—

	1880.	1879.	1878.
Slabs	6,590	12,205	972
Total two months	16,459	26,200	5,033
Deliveries in February	15,402	8,400	11,206
Total two months	24,414	14,952	19,323
Stock second-hand	44,285	54,527	36,300
Unsold Stock	38,726	29,139	14,974
Total stock	83,011	83,666	51,274
Peculs	1,000	13,325	4,200

	1880.	1879.	1878.
Import in February	18,790	18,790	18,790
Total two months	22,700	19,729	19,729
Deliveries in February	10,110	4,404	4,404
Total two months	13,580	10,172	10,172
Stock	54,282	67,082	48,067
Afloat, Feb. 28—Banco	10,000	20,000	15,000
Quotation, Feb. 28—Billiton	55½ fls.	40 fls.	40 fls.
	55½ fls.	39 fls.	38½ fls.

These combined returns of Banco and Billiton for 1880, compared with those for 1879, exhibit—A decrease of the import for February of 341 tons; a decrease in the import for the two months of 860 tons; an increase of the deliveries for February of 157 tons; an increase for the deliveries of the two months of 320 tons; a decrease of the stock second-hand of 720 tons; an increase of the unsold stock of 300 tons; a decrease of the total stock of 420 tons; an advance of the quotation of Banco of 25.17s. per ton.

#### PROVINCIAL STOCK AND SHARE MARKETS.

**CORNISH MINE SHARE MARKET.**—Mr. S. J. DAVEY, mine share-dealer, Truro (March 4), writes:—The market has been dull during the week, with not much change in prices until yesterday, when there was a general decline. The tin standards fell 2s. on Monday. Wheal Grenville and Wheal Uny shares advanced on reported improvements in both mines, but they do not close at their best. The following are to-day's prices:—Blue Hills, 4 to 4½; Carn Brea, 89 to 91; Cook's Kitchen, 8½ to 9½; Dolcoath, 62 to 63; East Pool, 32½ to 33½; Killifirth, 1 to 1½; Mellanear, 6 to 6½; New Cook's Kitchen, 7 to 7½; Penhalls, 3 to 3½; South Condurrow, 12 to 12½; South Crofty, 14½ to 15½; South Frances, 17½ to 18; Tincroft, 21 to 22½; West Bassett, 15½ to 19½; West Frances, 17 to 17½; West Peverar, 8½ to 9½; West Seton, 59 to 61; West Tolgus, 62½ to 67½; Wheal Agar, 6½ to 7½; Wheal Bassett, 4½ to 4½; Wheal Grenville, 9½ to 9½; Wheal Jane, 4½ to 5½; Wheal Kitty, 6½ to 6½; Wheal Prussia, 2 to 2½; Wheal Peverar, 30 to 32; Wheal Uny, 5½ to 5½.

In share and stock companies Chillington Iron have advanced 2s. 6d. per share, and Steel Company of Scotland 1s. 3d., but the bulk of the alterations are downward. Nant-y-Glo and Blaina (pref.) have declined 3s. 10s. per share; Bolekow, Vaughan, A, 11. 10s.; Ebbw Vale, 12s. 6d.; Monkland, 6s., ditto (pref.) and Shotts Iron, both 5s.; Benhar, 4s.; Glasgow and Port Washington and Mabello, each 3s.; Omon and Cleland, 2s.; and Chillington Iron, 1s. 6d. In the pig-iron market the tendency of prices has been downward; opening at 67s., warrants have gradually declined to 62s. 9d., owing to the increase of stock and less demand, but should they go to 60s. it would likely pay to buy. A good deal of business has been done in Benhar, which declined to 50s. on rumours that the report would be unfavourable; but it has since been stated that the puruers in the lawsuit against the company are anxious to compromise on terms favourable to Benhar; the price has, however, never recovered to the opening quotation of the week, 59s., and the preference shares are also flat. Glasgow Coal Exchange shares are wanted at about 35s., and there are also enquiries for Llynni, Tondu, and Ogmore, and Whitehaven Iron shares. The Skinner Iron Company at Darlington has been successfully reorganised, and the works reopened. The puddling mills are in operation, and in a few weeks the plate mills will be started. A company has been formed to produce ferromanganese for steel manufacture in place of spiegeleisen, with a capital of 100,000s., in 10s. shares. Llochore and Capledrae is said to have been successful in getting their new issue all taken up. Some business has been done in Flemington Coal shares from 95s. up to 110s. Andrew Knowles and Sons, 7s. 10s.; Ashton Vale, 10s.; Bilbao Iron, 33½; ditto (pref.), 47; Barrow Hematite, 140 to 150; Bolekow, Vaughan, A, 90; ditto, B, 46½; ditto (stock), 152; ditto (pref.), 20%; Carnforth, 11s.; Cardiff and Swansea, 60s.; Chapel House, 25s. to 35s.; Chillington, 5½; Charles Cannell and Company, 2s. 6d.; premium; Clyde Coal, 80s. to 85s.; Consett, 18 premium; Consett Spanish Ore, 35s.; Chatterley, 16½%; Darlington Iron, 5s.; Ebbw Vale, 12½ to 12½; Great Western Colliery, B, 85s.; Hamstead Colliery, 5s. 6d.; Henry Briggs, A, 5s. 10s.; John Bagnall and Sons, B, 27s. 6d. to 32s. 6d.; John Brown and Co., 60s. 10s.; Lydney and Wigpool, 65s.; Marbella, 9s. to 95s. 6d.; Monkland, 7s. to 77s.; ditto (preference) fell from 75s. to 6½; Mawnyd Iron, 5s. 6d. to 55s.; Mersey, 32s. 6d. 10s.; Muntz's Metal, 70s. prem. Nant-y-Glo and Blaina (pref.), 38 to 40. Newport Abercarn, 70s. North Lonsdale, 90; Omon and Cleland, 32s. Parkgate, 15½ prem. Rhymney, 30s. Silksstone and Dodworth, 27s. Steel Company of Canada, 4½ to 5. Steel Company of Scotland, 11½ to 11½; ditto (new), 6s. 6d. to 6s. 7d. Shotts Iron, 93 to 95. Sandwell Park, 20½. Sheepbridge (new), 11½. Staveley, A, 29½ prem.; ditto, B, 5 prem.; ditto, C, 90½. South Wales, 95s. Scottish Australian, 40s. to 45s. Tredegar, B, 28. Ulverston, 5½. West Cumberland, 5½ dis. Woking, 14½.

—Mr. J. H. REYNOLDS, stock and share broker, Redruth (March 4), writes:—At the close of last week a slight recovery took place in our market, but this has again been succeeded by a dull market, and a further relapse in prices. The tin standards were reduced 2s. on Monday last. The closing prices are annexed:—Blue Hills, 4 to 4½; Botallack, 90 to 100; Carn Brea, 89 to 91; Cook's Kitchen, 8½ to 9½; Dolcoath, 62 to 63; East Pool, 32½ to 33½; Mellanear, 6 to 6½; New Cook's Kitchen, 7 to 7½; North Buoy, 7½ to 8; Penhalls, 3 to 3½; Pendarvor United, 8½ to 9½; South Condurrow, 12 to 12½; South Crofty, 15 to 15½; South Frances, 17 to 17½; South Seton, 55 to 57½; West Tolgus, 60 to 62½; West Pole, 18½ to 19½; West Seton, 59 to 61; West Tolgus, 62½ to 67½; Wheal Agar, 6½ to 7½; Wheal Bassett, 4½ to 4½; Wheal Grenville, 9½ to 9½; Wheal Jane, 4½ to 5½; Wheal Kitty, 6½ to 6½; Wheal Prussia, 2 to 2½; Wheal Peverar, 30 to 32; Wheal Uny, 5½ to 5½.

—Mr. J. H. REYNOLDS, stock and share broker, Redruth (March 4), writes:—The market has been dull and depressed during the week, and prices of all tin shares are ruling lower. The following are the closing prices:—Blue Hills, 4 to 4½; Carn Brea, 91 to 93; Cook's Kitchen, 8½ to 9½; Dolcoath, 62 to 63; East Cardon, 3½ to 4½; East Lovell, 10 to 2½; East Pool, 32½ to 33½; Killifirth, 1 to 1½; Mellanear, 6 to 6½; New Cook's Kitchen, 7 to 7½; Penhalls, 3 to 3½; Pendarvor United, 8½ to 9½; South Condurrow, 12 to 12½; South Crofty, 15 to 15½; South Frances, 17 to 17½; South Seton, 55 to 57½; West Tolgus, 60 to 62½; West Pole, 18½ to 19½; West Seton, 59 to 61; West Tolgus, 62½ to 67½; Wheal Agar, 6½ to 7½; Wheal Bassett, 4½ to 4½; Wheal Grenville, 9½ to 9½; Wheal Jane, 4½ to 5½; Wheal Kitty, 6½ to 6½; Wheal Prussia, 2 to 2½; Wheal Sisters, 4½ to 5½.

—Mr. M. W. BAWNED, Liskeard (March 4), writes:—Market dull, and devoid of all activity. The tin standard has been reduced 2s. per ton, and prices generally lower. Subjoined are the closing prices this afternoon:—Bedford United, 1 to 1½; Carn Brea, 90 to 91; Clitters, 5½ to 5½; Cook's Kitchen, 8 to 8½; Dolcoath, 62 to 63; Devon Consols, 15 to 15½; East Cardon, 3½ to 4½; East Pool, 33 to 34; Glasgow Cardon, 1½ to 1½; Herdfoot, 4½ to 4½; Hindgill, 2½ to 3; Hindgill Valley, 2½ to 3; Phoenix, 5½ to 5½; Prince of Wales, ½ to ½; South Cardon, 13 to 14; South Crofty, 14 to 15; South Frances, 17 to 17½; Tincroft, 22 to 23; West Bassett, 18½ to 19½; West Frances, 17 to 17½; West Mary Ann, ½ to ½; West Phoenix, 2½ to 3; Wheal Agar, 7½ to 7½; Wheal Crebor, 8½ to 9; West Tolgus, 62½ to 65; Wheal Kitty, 6½ to 6½; Wheal Jane, 4½ to 5½; Wheal Jewell, 1½ to 1½; Wheal Peverar, 30 to 32; Wheal Uny, 5½ to 5½.

**MANCHESTER.**—Messrs. JOSEPH R. and W. P. BAINES, sharebrokers, Queen's Chambers, Market-street, Manchester (March 4), write:—The share market during the past week has been flat and declining. What business is reported is pretty well distributed amongst the several classes noticed below; but all have been devoid of animation, and prices generally have tended in buyers' favour, with some exceptions, which are enumerated under:—

**BANKING CONCERNS.**—The instances of business done are not numerous, but there are some worthy of note. Bank of Bolton, A, have been enquired for lately, and prices show a fresh advance of 2½%; the B shares of the same are not altered in quotation, but are in sympathy somewhat stronger. Manchester and County are marked ½ better, but Manchester and Liverpool District are ¾ and Soutport and West Lancashire ½ lower.

**INSURANCE SHARES** show more fluctuations than of late, and whilst with adverse changes are of no great moment. Maritime are ½; Commercial Union, ½; and Equitable Fire, ½ higher.

**IRON AND COAL, &C., AND MINING.**—Several very important changes are to be found in the figures ruling to-day, compared with those at time of last notice. The great majority of changes are adverse, foremost amongst which are Sheepbridge, 6½; Bilbao Iron Ore, 5½; Nant-y-Glo and Blaina Preferred, 3½; John Brown, 2; Bolekow, 1½; ditto, A, (60), paid, 1½; ditto (fully paid), 1; Chatterley Iron, 1½; United States Rolling Stock, 1½; Staveley, ½; Tredegar Iron, A and B, ½ each. On the other hand, Canadian Copper &c., shows an advance of 12½, and Parkgate Iron of ½. The market in these concerns, it will be seen, is generally much easier.

**COTTON-SPINNING AND MANUFACTURING.**—Some few concerns have moved upward, though generally prices are not better than a week ago, although there are very few which have to any great extent declined in value. That this market should have, for the few exceptions mentioned, remained stationary is somewhat inexplicable; for the stock-takings that have been made known during the past week cannot have failed to satisfy the fullest expectations of those who looked for large profits being declared. Star Spinning shows a profit of 34000s., and are paying 3s. per share dividend; Central Mill Company a profit equal to 2700s. on the last quarter's working. With results such as these, and continued activity in the trade, higher prices may with certainty, we think, be looked for at no distant period, although at present apathy seems the chief feature of the market.

**CORPORATION STOCKS AND GAS AND WATER ANNUITIES** remain unaltered in quotations, some little business being in progress at prices recently unaltered.

**MISCELLANEOUS** have been somewhat neglected, and there are no changes to report.

**RAILWAYS.**—Considerable uneasiness prevailed at the time of our last report as to the settlement of the account then proceeding, differences being very heavy. The settlement was got over fairly and prices improved, but the appearances of Russian affairs being very threatening caused the market to again become unsettled. March 2, however, passed off without any untoward event taking place, and money becoming easier, coupled with excellent traffic returns, yesterday brought in numerous buyers, and markets responding well, rails all close remarkably. The stocks chiefly in favour are London and North-Western, Chatham, Brighton, A, Great Western, and North-Eastern. Scotch lines have moved about to-day, Caledonian being subjected to severe fluctuations, and with a dividend announced of 3 per cent., and surplus of 55,000s., against 4½ per cent. last year, have risen to 110½, and look well for further advance. Although the evidence touching the Tay Bridge disaster is not encouraging to North British proprietors, the price holds its ground, and shows no signs of weakness.

**NEWCASTLE-ON-TYNE STOCK EXCHANGE.**—Messrs. SPENCE and IRWIN, stock and share brokers, Grey-street, Newcastle (March 4), write:—The inactivity we mentioned in our last has continued this week. The annual report of the Bede Metal and Chemical Company was issued on the 28th ult., and shows a profit of 11,660s. 11s. 10d., which, with 12,882s. 8s. 10d., brought forward from last year, leaves an available total of 13,559s. 6s. 8d. This is to be divided as follows:—Interim dividend of 1½ per cent. per annum, 9000s.; leaving 1589s. 8s. 8d. to be carried forward. This being looked upon as satisfactory, the shares immediately rose to par, at which price they are now offered, buyers at ½ dis. The report does not mention the Spanish mine, so that the meeting to be held on the 15th inst. is anxiously looked forward to. Bolekow, Vaughan, and Co. issued their annual report yesterday, and it also is considered satisfactory. It shows an available profit for

distribution of 161,344s. 14s. 2d., which it is proposed should be disposed of as follows:—In payment of interest on debentures, 24,069s. 2s. 1d.; for dividend on preference (5 per cent.) shares, 12,788s. 6s. 5d.; for dividend on A and B shares at the rate of 5 per cent. per annum, 122,023s. 10s. 8d.; leaving 2463s. 15s. 2d. to be carried forward. The report adds: “that the resolution for reducing the shares of the company to a smaller denomination will shortly be submitted to an extraordinary general meeting of the shareholders.” The shares stand to-day—A 30 prem., B 46, and Pref. 20½. Consett Irons have eased a little since our last, being now offered at 17½ prem. Consett Spanish Ore are flat at about 35s. to 36s. Darlington Iron, 6 dis., is freely bid for these shares, but at moment there is no seller under 4½ dis.; they seem like going higher. Hopkins, Gilkes, and Co.'s shares remain about the same as last week—14½, with very little doing. John Abbott and Co.'s shares are still offered at 10 dis. Palmer's Shipbuilding and Iron Co.'s A shares are offered at 25, and B at 6½ dis., no buyers. Skinner Iron offered at 6, without tempting buyers. West Cumberland Iron and Steel shares are offered at 5½ dis., whilst there is a probable buyer at 6 dis. Crook Burn Mine shares remain the same as last week—1s. 3d. prem. to 2s. 10s. paid. Dubby Syke Mine shares have been pretty freely dealt in during the week, and leave off 15s. to 15s. 6d. for 18s. 6d. paid shares, and 18s. 6d. to 17s. 6d. paid shares. Green Hurth Mine shares have been done at 7½, which price is still to-day. The scheme for division of property is out. Teesdale Mine, 7s. 6d. bid for ordinary shares; sellers at 10s. The preference shares are offered at 11s.

£ for 3000s. is spent the mine will be worth ten times that amount. The sett is of good size, and close to Camborne station. The dues are liberal. The management is to be local, and most of the shares will also be subscribed for in the district. The mine can be worked cheaper than any other of the same depth. It will be divided into 4296 shares, at 12. each.

**INDIAN GOLD MINING COMPANY (Limited).**—Another new Indian gold mine company has been announced under this name, and the shares are understood to be already all subscribed. The capital is 100,000s., of which 33,000s. is taken by the vendors, in 12s. shares. The property extends to 3000 acres, and is situated in the Wynad district of the Madras Presidency.

The following calculations show the yield on money invested at present prices in shares named, based upon the last average yearly dividends being maintained:—In shares of coal and iron companies Armstrong Colliery would yield 5½ per cent.; Bolekow, Vaughan and Co.'s Stock, 3; Carnforth Gas Coal, 8½; and Muntz's Metal, 6½. In oil companies, Dalmeny would yield 10½; Oakbank, 9½; ditto, new, 7½; Price's Patent Candle Company, 7; Uphall, 4½; and Young's Paraffin, 8½. Scottish Wagon Company would yield 5½; ditto, New, 6½; Tharsis Sulphur and Copper, 4½; ditto, new, 4½; and United States Rolling Stock, 4½.

**EDINBURGH.**—Messrs. THOMAS MILLER and SON, stock and share brokers, Princes-street (March 4), write:—The dealings in railways to-day were chiefly in Caledonian. The price began at 109, and after rising to 110½ fluctuated between that and 109½, and closed 109½ to 110. The dividend was considered satisfactory under the circumstances. The shares in the mining department which had most attention to-day were those of the Canadian Copper and Sulphur Company (Limited), which changed hands at prices varying from 58s. to 60s. 6d. During the past week the quotation has risen from 47s. Flagstaffs have declined considerably within a week. The following quotations are from this day's Official List:—Ariston Coal Company, 6½; Benhar Coal Company, 54s. 6d. to 56s. 6d.; Cairnforth Gas Company, 9½ to 9¾; \*Canada Copper and Sulphur, 59s. 6d. to 60s.; \*Clyde Coal Company, 83s.; Fife Coal Company, 5½; Glasgow Caradon Company, 31s.; Glasgow Port Washington Iron and Coal, 83s.; Huntington Copper and Sulphur, 90s. to 92s.; Lochore and Capledrae Coal, 1½; Marbella Iron Ore, 91s. to 93s.; Monkland Iron and Coal Company, 70s. 6d. to 71s. 6d.; ditto, Guaranteed Preference, 7½; Omor and Cleland Iron and Coal, 34s.; Shorts Iron Company, 95s.; Steel Company of Scotland, 11½ to 12½; McSwiney, 7½ to 8; McKenzie, 10½ to 11½; Tharsis Sulphur and Copper Company, 32s. 6d. to 33s. 6d.

**IRISH MINING AND MISCELLANEOUS COMPANIES' SHARE MARKETS.**

**DUBLIN.**—MARCH 4.—A fair amount of business has been doing all the week. Berehavens after being somewhat difficult of

The  
Best Speculation, and the  
Cheapest Share in the  
Market is  
WEST

DEVON

GREAT  
CONSOLS,

The adjoining Mine to the  
Celebrated Devon Great  
Consols, where

each £1 Share

went to £600 in value,  
and paid some £1200 in  
Dividends, whose identical South  
Lode it is discovered runs into  
West Devon Great Consols, from  
the back of which Splendid  
Copper Ore has been broken  
this week.

## WEST DEVON GREAT CONSOLS

The Shares are dealt in on the  
Market by all the principal  
Dealers.

The quotation has  
already advanced  
as we predicted to  
40s. to 42s. 6d. per  
Share, and will go  
higher. We are pre-  
pared to buy back  
all Shares sold by  
us at 25s.

J. SCOTT & CO.,  
Palmerston Buildings,  
Old Broad Street,  
E.C.

\* \* The importance of this property, only separated from its celebrated neighbour by the "Tamar," will be best seen by a brief description, which can be had from us on application. These Shares are very cheap, as many mining experts believe they will advance immensely—and on the Market the sum of Ten Shillings per Share has been offered for the option of "calling" the Shares at the price of £5 each for the end of June next.

## Mining Correspondence.

## BRITISH MINES.

ABERLLYN.—John Roberts, March 3: The valley cross-cut has crossing the level some nine branches of carbonate of lime mixed with strong lead. These branches are dipping into the lode, and will no doubt serve as feeders to it. All the other points are much the same as reported last week.

BEDFORD UNITED.—R. Goldsworthy, March 3: No lode has been taken down in the 138 fm. level east since last report. The lode in the 115 fm. level east is 2 ft. wide, worth 9d. per fathom. In the winze sinking in the bottom of this level the lode is 2 ft. 6 in. wide, worth 10d. per fathom. The stopes are producing their usual quantity of ore. No other change to notice.

BELL VEAN.—James Bray, Feb. 28: During the past week we have met with a branch in the cross-cut about 6 in. wide, composed of capel and spar, with good spots of tin, but not enough to value. In the past month the men have fixed the air machine and pipes, and driven 7 ft. in the cross-cut. According to your instructions I shall put six men in the cross-cut next month to push on same with all possible speed.

BETTWYS-Y-COED.—M. H. Whitford, March 4: There is no alteration to report since my last. We are pushing ahead with all speed the 30 east and the adit level.

BLUE HILLS.—S. Bennetts, Stephen Davey, Feb. 28: The lode in the 42 west end from the Blue Burrow shaft is 2 ft. wide, and worth 5d. to 6d. per fathom, and in the east end it is producing some good stones of tin, but is somewhat unsettled. The 30 east end is worth 10d. to 12d. per fathom, and the rise above this level is worth 14d. per fathom. The 20 east end has just cut the south or leading part of the lode, but is not as yet through it. So far as seen it looks promising and contains tin.

BODIDRIS.—H. Hotchkiss, March 2: There is nothing new in our underground works calling for any special remarks; all points are being urged forward with spirit. I have let the meadow shaft to sink below the 45 to nine miners and two tanksmen, at 16d. per fathom for 10 fms., who, if they complete by June 5 next, will receive a bonus of 5d.

BWLCH UNITED.—S. Bray, Feb. 28: Good progress continues to be made in Ritchie's shaft, which is now down 2 fms. below the 100; sinking by nine men, at 17d. per fathom. The 100, east of Ritchie's, is set at 6d. per fathom. Lode large and kindly, with little lead ore, but not in paying quantities. The 80 is set to six men, at 6d. per fathom; at present the lode is not so promising as usual owing to its being broken by cross measurements and clay joints, but good progress is being made, and I hope the driving will soon reach an improvement. The rise in the roof of the 70 is set to six men, at 7d. 10s. per fathom, and has improved for lead ore, and will further improve as soon as the stope is reached. The stope near the winze between the 80 and 70 is set at 5s. per fathom. The walls of the crusher-wheel-split are near completion, and after which the masons will commence walling round the large plunger and other work. The weather is fine, and all work going on satisfactorily.

CARNARVON COPPER.—J. Roberts, March 2: The water-wheel and rods at the old shaft are working well, and have forged from 6 to 7 fms. Considering the amount of rain, and the large space that there is containing the water, I consider this fair progress. Unfortunately, the bucket rod of the top lift in the new shaft has broken, and the pump being so small, the rods got jammed in trying to get the broken ones out. In order to overcome this we shall wind out the water with the whinam till we get down to the door. This will draw out the water faster than pumps would of themselves, so I do not anticipate that this will hinder us long. We are repairing the pulley stands and water-wheel, and, all being well, we shall be able to start them on Monday.

CLEMENTINA.—J. Roberts, W. Sandoe, March 3: At the 34 fm. level we have been rising towards the old sums in the bottom of the 15, to the north of the engine-shaft. We have got up about 3 fms. We have had a very nice lode, but it is pinched a little in the extremity of the rise; as the lode is subject to these little changes, we do not think this of so much importance, and especially as the lode in the sum is improving, and now down about 5 fms. from the 15, and within 10 fms. of the back of this rise. We are hoping that when we hole these we shall have a good piece of lead ground to take away. The lode generally is tolerably open, and will be comparatively cheap for stoking. We are now sinking below the 25, south of shaft, by two men, and the lode looks very kindly, with a branch of lead about 3 in. wide. The incessant rains we have had during the past month have kept the water in the bottom of the lode.

COMB MARTIN.—J. Harris, J. Comer, March 4: The lode in the winze sinking below the adit, level from 17 to 5 ft. wide, and showing good spots of lead, blonde, and mudi embedded in flookan, &c., altogether a very pretty-looking lode for the production of lead when we get deeper. The lode in the north-west end on the south counter lode is from 3 to 4 ft. wide, containing good-looking quartz and flookan associated with gossan, in which we find good lead, mudi, and spots of copper ore, a very kindly lode. This lode it is said, produced large quantities of good lead ore in the former working of the mine, west of Knight's cross-course, which we calculate is some 50 or 60 fms. west of our adit cross-cut, and the old workers say there was nothing done east of Knight's cross-course. We think there may be good chance of meeting with good deposits of lead in our development of this lode east of this cross-course, and the ground is easy for drivage. The water at the 17 is 1 ft. above the back of the roadside shaft.

DENBIGHSHIRE CONSOLIDATED.—R. Prince, A. Thomas, March 4: In the north cross-cut out of the 112 west—believe we shall shortly in erect the main lode; the beds of rock are commencing to dip. Should the lode be found rich at this point, the value of the vein will be greatly enhanced. The 112 east main lode continues to improve in character and advance on its course. Stopping operations in the 65 continue as for some time past. In the south cross-cut we drove a hole with boring machine 3 ft. in the forepart, resulting, I think, in finding another joint; for when this 3 ft. was accomplished we had a sudden change from hard to soft ground, and a small stream of water also flowed from the hole. The men are now hard at work driving, and the result will be known in about a week's time. We are now busy on the dressing floor, and shall sell and deliver a further parcel of lead, weighing 10 tons, on Saturday.

DERESBY CONSOLS.—J. Roberts, W. Sandoe, March 3: We have no change to report since last week, except the ground on the Gorse heading easier.

DERESBY MOUNTAIN.—J. Roberts, W. Sandoe, March 3: Monthly Report: During the last month but little change indeed has taken place in the No. 5 either in the sum or stopes. We have had to take away some of the poorer parts of the lode, in order to make advantage for working. Of course, in a lode so very wide we cannot expect to find it uniformly good throughout, yet still the poorer parts must be worked away. We have already opened on it 6 yards or more in width, and there is lead still towards the footwall. We are sinking again, and find that the bottom of the sum has quite as good an appearance as any part of the lode we have seen, with regard to the evidence of its holding down. We have a large lode in the very bottom, with fine specimens of lead and carbonate of lime mixed together. When we get the communication with a new level below we shall have a great advantage for breaking large quantities of stuff. The Gorse-shaft, which is being sunk for this object, is progressing very favourably, and is now down 5 fms., and we expect that in about three months it will be down the required depth, 15 fms. We have two men staving in the bottom of No. 2. The part of the lode we are working on is worth about 1/2 ton of lead per fathom, which will pay a small profit on the present price of lead. We are doing some little repairs to the crusher—changing the rolls, and repairing the raff-wheels, and some other little items in connection therewith. This will soon be finished with, and we shall be in good trim for going on again. There was a very heavy flood last night, which, unfortunately, broke into the adit level, and caused some little hindrance in the No. 5, both in the sum and Gorse-shaft.

DEVON GREAT CONSOLS.—Isaac Richards, March 4: Wheat Josiah—New South Lode Shaft. In the 130 west the lode is 2 ft. wide, composed of capel, quartz, mudi, and some copper ore of good quality.—New Shaft—New South Lode: In the 205 west the lode is 5 ft. wide, composed of capel, quartz, mudi, and some copper ore of good quality.—New Shaft—New South Lode: In the 130 west the lode is 2 ft. wide, composed of capel, quartz, mudi, and a little copper ore of good quality. In the 115 west the lode is 1/2 ft. wide, composed of capel, quartz, mudi, and a little copper ore of good quality. In the 100 east, on the south part of the lode, the lode is 3/2 ft. wide, composed of capel, quartz, mudi, and a little copper ore. In the 75 west, east of Bartlett's winze, on the north part of the lode, the lode is 5 ft. wide, and worth 3 tons of copper ore, or 9d., and 3 tons of mudi per fathom. In Mastin's rise in the back of the 175 west, the lode is 4 ft. wide, and worth 4 tons of copper ore, or 12d., and 3 tons of mudi per fathom. In the 115 east the lode is 5 ft. wide, composed of capel, quartz, mudi, and a little copper ore of good quality. In the 100 east, on the south part of the lode, the lode is 3/2 ft. wide, composed of capel, quartz, mudi, and a little copper ore. In the 75 west, east of Bartlett's winze, on the north part of the lode, the lode is 5 ft. wide, and worth 3 tons of copper ore, or 9d., and 3 tons of mudi per fathom. In Fox's winze in the bottom of the 100 east the lode is 5 ft. wide, and worth for length of winze carried 19 ft. 4 tons of copper ore, or 12d., and 3 tons of mudi per fathom.

DUBB HOLLOW.—William Vipond, Feb. 28: After finishing with sinking the sump hole below the bottom of the shaft I set the men to fix a platform about 3 ft. up the shaft to give us still more standing room for the water. I think this place will hold something like 12 hours water, and will allow the men to get on better with driving, as they will not have to be continually driving it. They got a commencement with driving on Thursday, and I shall set them a bargain at it on Monday. I propose driving for a time with eight men, as I think we shall get on at less cost with that number than twelve, and do more work comparatively. I do not think this will be the best way of dealing with it at an early date.

EAST LONGSTONE.—T. Phillips, March 3: I beg to inform you that I am forcing the men on with the driving of the adit level as fast as possible; but the ground gets a little harder as the men drive into the hill, and I suppose it will continue to do so until they get in close proximity to the lode, which I am opinion is several fathoms ahead of the adit end yet.

EAST ROMAN GRAVELS.—A. Waters, March 4: The main points under development here and the tributary pitches throughout the mine are without change worthy of remark for the last week or two. We shall be ready next week to commence sinking in the 75 fm. level south on a lode worth from 2 to 3 tons of lead ore per fathom. We have delivered the whole of the last sale of lead ore.

EAST WHEAL LOVELL.—R. Quenell, March 3: We have divided and cased shaft, and put the horse-whim to work. We have also cut plat and barrow-road, and have just commenced sinking below the level, but have not done enough to make any alteration in the lode. We shall now sink the shaft as fast as possible, and also drive east and west.

FORTESCUE (Stannagwyn).—J. H. James, H. Harris, March 3: We are proceeding as fast as possible with the buildings; the carpenters are roofing in the houses, and the new road to the engine-house is more than half made. In the old rubbish heap used for making the road the men have found several pure native silver lumps, evidently left by the old men streaming for tin at last reported.

GLOSGOW CARDON CONSOLS.—William Taylor, Wm. J. Taylor, March 1: The shaftmen are getting on fairly with their bargains, cutting 10 ft. 6 in., and 10 ft.

the 102. There is not much change in the new lode in the 102 east since our last report. We are only carrying the south part of the lode, which is worth 6d. to 8d. per fathom. We cannot do anything to the north part until the flat is out to get away the stuff. In the north lode we have held the winze from the 90 to this level. We are opening out some on ground, and are now driving east from the bottom of this winze. The lode is worth about 6d. per fathom, but hope it will improve as it gets more under the ore ground in the 90. In the north lode in the 90 west we are cutting in the south to lode to the winze from the 102, and expect to do this in a day or two. This will open out some ore from the 102 for stoking. The 90 east on the south lode is worth 6d. per fathom. The ground in the cross-cut south at this level towards the new lode is a little better, and we hope to get a further change soon. The stopes and pitches on the whole are about the same as last reported, varying in value from 10d. to 15d. per fathom. The computed quantity of ore for the next sale is 160 tons, which will be sold on the 22nd inst.

GLENROY.—There is no change in the lode in either of the bottom ends since last week's report. We shall not cross-cut to the hanging part of the lode in the north end till the end is advanced 2 or 3 fms. further. We can only make progress in this way from the size of the lode. We are still proving the lode in the 60 north, and have on the hanging wall a leader about 1 ft.

GORESDD.—W. Edwards, March 4: In the 60 east level the lode is 1 ft. wide, very good for blonde. We are preparing to sink the shaft below the 102, but in hard ground and not yet to value. We are evidently near some change ground ahead of us, and which we have been so long expecting. The present composition of the vein is blonde and lead mixed. In the 90 sump the lode is 1/2 ton per fathom. I like the appearance of the ground here very much. There is no change in the tributary bargain. We sold last week 14 tons of lead realising 13d. 15s. per ton, and are busy with another parcel.

GREAT HOLWAY.—W. T. Harris, March 4: We are busy at Roskell's, and so soon as the shaft is sunk another 12 ft. we shall fix bearers, cistern, &c., and then intersect the lode. When this 12 ft. is accomplished we can go to work upon the ore proved in the 80 at the engine-shaft, and with other points available the returns may be increased to any reasonable quantity that may be required.—

GARDEN SHAFT: The stope in back of the 55 yard level is producing 2 tons of blonde and 1/2 ton of lead per fathom; below the level 2 1/2 tons of blonde and 1/2 ton of lead per fathom. Office shaft is producing 2 tons of blonde and 1/2 ton of lead per fathom. The level engine-shaft is producing fully 3 tons of blonde per fathom.

GORSE.—W. Edwards, March 4: In the 247 end north the lode is 1 ft. wide, and contains some change ground ahead of us, and which we have been so long expecting. The present composition of the vein is blonde and lead mixed. In the 90 sump the lode is 1/2 ton per fathom. I like the appearance of the ground here very much. There is no change in the tributary bargain. We sold last week 14 tons of lead realising 13d. 15s. per ton, and are busy with another parcel.

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GARDEN.—W. Edwards, March 4: In the 247 end north the lode is 1 ft. wide, and contains some change ground ahead of us, and which we have been so long expecting. The present composition of the vein is blonde and lead mixed. In the 90 sump the l

driving is by the side of the lode in favourable granite. In the 90 west we have made fair progress during the past week. The boring machine answers very satisfactorily, and the lode is producing occasional stones of ore. In the eastern and from rise in the back of the 40 the lode has slightly improved; now worth 2 tons of ore per fathom. In driving east from the cross-cut at the 30 the branches are small, but still contain some good quality ore. In the 20 end west the lode is large, with occasional stones of copper. All other points as last reported.

**MELLANEAR (Copper).**—J. Gilbert, March 4: Gundry's Shaft: The lode in the 50, driving east, on the south-east part of the lode, is 2½ ft. wide, and yielding 1 ton of copper ore per fathom. The lode in the 60, west of shaft, driving east on the south-east part of the lode, is 3 ft. wide, and yielding 3 tons of ore per fathom. The lode in the 70, west of shaft, driving east on the south-east part of the lode, is 5 ft. wide, and yielding 2 tons of ore per fathom. The lode in the 70, west of shaft, on main lode, is 2 ft. wide, and yielding 1 ton of ore per fathom. The lode in the 80, west of shaft, is 4 ft. wide, and yielding 4 tons of ore per fathom. The lode in the 90, west of shaft, is 5 ft. wide, and yielding 4½ tons of ore per fathom. The lode in the 100, west of shaft, is 4 ft. wide, and yielding 2 tons of ore per fathom. The lode in the 100, east of shaft, is 2 ft. wide, and yielding ½ ton of ore per fathom. The lode in the 110, west of shaft, is 5 ft. wide, and yielding 1 ton of ore per fathom. The lode in the 100, west of shaft, is 2 ft. wide, and yielding a little saving work for copper ore. The ground in the 70 cross-cut, south of skip-shaft, is easy for driving, and much the same in character as for some time past.

**MINERAL CORPORATION OF GREAT BRITAIN.**—W. Bennetts, March 3: **HAFNA and HIGH HAFNA.**: No 1 stop in the back of No. 3 adit, west of No. 2 rise, is not looking quite so well an last week, but there is every indication of the lode improving shortly. No. 2 stop in the back of No. 3 adit west of No. 2 rise, is worth 12 cwt. of lead and 1 ton of blends to the fathom. At surface we are getting on as fast as we possibly can with the dressing of the ore.

**MONA.**—W. Hughes, March 3: Underground Department: I have no change of material importance to notice, except that in the trial referred to in my last as having been started in the 55, about 20 yards west of the nearest tribute pitch, there is a great improvement in the value of the ground. A clerical error in my last report made me see that the ground in the large sink, north of our present tribute pitches, in the 55, was worth 5 tons of ore per month, it should have been 5 tons per fathom, and I am happy to report the present appearances justify me in valuing the ground at 6 tons to the fathom at least. This will make valuable tribute ground as it is drained by the 70, now being energetically pushed forward from Cairn shaft. The water, which is exceedingly strong with cupriferous solution, is at present a great hindrance to the miners employed in this place. The windmill has pumped the water at Cairn shaft to within 6 yards of the bottom, but owing to the uncertainty of the wind we cannot rely upon this depth being maintained until a steam-engine is put up as an auxiliary. The extensive ground lying unworked at this portion of the set must, therefore, be allowed to stand idle until an engine is placed upon the shaft. In the blue-stone working we are still sinking a shaft through the broken ground which fell in some years ago, and are pushing it on as fast as possible. We hope to reach the great mass of blue-stone known to exist here in about 6 or 7 fathoms from the present bottom. The production is rather increasing in the present workings. We are carrying down daily for shipment, and have a stock of 700 tons on the mine, besides the cargoes lying on the quay at the port ready to put on board ship. Vessels will be chartered as soon as possible.

**Surface Operations:** Everything goes on regularly. The precipitation pits are in full work, and will, after the usual period, turn out the ordinary quantity of copper. The weather has not as yet been favourable to the preparation of ochres and oxides for market. The process of lixiviation of native ochre is still carried on at the paint mill, the only interruption being that caused by calm weather. At the farm all goes on in its usual course; agricultural matters are being attended to, and our live stock are all in good health and condition.—**Smelting Department:** The new furnace referred to in my last as having been erected and lighted works admirably, and we are now busily engaged building another. The stock of regulus is still increasing, and only waits instructions for selling. Owing to the large accumulation of copper ore as smalls we have found it necessary to light the large calcining furnace, as these ores do not admit of being calcined by kilns by the method applied to our rough ores. The arrangement whereby our ores are calcined for the sulphur they contain contributes to work to our mutual advantage and satisfaction.

**MORFA DU.**—T. Mitchell, March 2: Setting Report: The bottom end to drive south-east on the course of the lode, by nine men, the month, at 7 ft. 10 in. per fathom. I am glad to say that the lode is looking well here; it is 4 ft. wide, solid, and rich blue-stone. A portion of the lode contains some rich copper. The driving by the White Rock shaft, by six men, at 9 ft. per fathom. Here the end continues to break through small strings and branches of spar, with a little copper, which looks promising.

**MORFA DU.**—T. Mitchell, March 4: The lode in the bottom end here is looking well; the driving is compact and rich in quality. We have no change to the blue-stone driving by the White Rock shaft since my last.

**MYNYDD GORDDU.**—J. G. Green, March 3: Pending the resumption of the driving of the shaft I have put the men to stop the back of the 34, west of the winze, on a lode producing about 10 cwt. per fathom. There is no alteration in the 34, driving west. The branch of ore in caunter lode appears to be going more to the north, and is worth to-day 15 cwt. per fathom. All the other points are the same as last reported. We have completed the stall in the 24 west, and the men have resumed driving. Our parcel of ore realised 14/- 15/- per ton, and was all delivered to the railway the day of sale—the 28th ult. We are pushing on for another sampling, which I hope to have ready by the regular day.

**NANT RHYNS SYNDICATE.**—Wm. Michell, March 1: During the past week we have been engaged in opening about the copper lode. We find branches of spar, intermixed with carbonate of lime, spots of copper and sulphur. There are many branches dropping in from all directions. At this point the rock is rather unstratified, being at surface and near the large flockan or soft ground. In depth the branches above referred to will form one large body of ore. On the whole, the indications are favourable for opening out a first-class mine.

**NEW BRONFLOYD.**—Thomas Kemp, March 4: Setting Report: No. 3 Shaft: North Lode: In cross-cutting the north part of the lode in the 121 west we have come in with anything of importance; the lode is principally killas, showing a little lead ore. Owing to the accumulation of stuff this bargain for the present is suspended, but so soon as convenient the said stuff will be removed, and operations resumed. The stop over this level, east of winze, is re-set to eight men, for four months, at 8/- 10/- per ton; the lode is worth 15 cwt. of ore per fathom. The men in the tribute pitch under the 96, west of Joshua's winze, are earning fair wages, at 16/- per ton. A pitch over the 96, west of the 73, east of shaft, to four men, for two months, at 8/- per ton; the lode here is large, carrying good strings of ore. The stop under the 52, west of shaft, is worked by four men; the lode is exceedingly hard, worth 15 cwt. of ore per cubic fathom. —**Middle Lode:** Four men to continue the 73 end, west of No. 2 cross-cut, at 10/- per fm.; the part of the lode carried is yielding good stones of ore. Two men to stop over the back of this level, at 10/- per fathom; the lode is worth 30 cwt. of ore per fathom. The part of the lode opened on by the 63, or intermediate level, is carrying nice strings of ore; set to six men, at 17/- per fathom. A tribute pitch over the 40, east of shaft, to two men, for two months, at 16/- per ton. Hauling and dressing is being pushed forward with all dispatch. Machinery is working good.

**NEW WHEAL PEEVOR.**—W. T. White, March 1: The work throughout this mine is being vigorously carried on, and I am pleased to say with satisfactory results. Knowing the course of Wheal Peevor lodes as I do, it has not been difficult to find these lodes in New Wheal Peevor, and the north and south lodes have, in my opinion, been discovered, and we are daily expecting to cut the middle lode. The outcrop of the south lodes here is of the same congenital character as at Wheal Peevor and West Peevor—in fact, I think I have never seen anything more congenital for tin, the gossans being of very superior quality. I purpose to extend the present adit level north-east on the caunter lode to intersect these lodes at about 20 fms. deep, and as the distance is but little, and the ground easy for driving, I hope soon to be able to report something important. Altogether the mine possesses most favourable indications, and I believe that as we carry out our operations good results will follow.

**NORTH D'ERESBY MOUNTAIN.**—March 4: The lode in No. 1 adit has improved very much during the past week; we have broken some nice lead from the end to day. Judging from the appearance of the lode I believe we shall shortly have a good improvement in this end. The lode north of cross-cut, so far as seen, is from 10 to 12 ft. wide, containing a little lead throughout.—**No. 2 Adit:** I am pleased to say that the lode here is showing good indications of resuming its former value. I hope to have the foundation for the smith's shop and office prepared for the masons in the course of three or four days; the weather has been so very wet it would have been done before now.

**NORTH PENSTRUTHAL.**—W. Polkinghorne, March 4: We have broken some of the lode in Highburrrow shaft to-day, and find it to be increasing in size, and producing copper ore, but not of much value as yet.

**PANT-Y-MWYN.**—E. Parry, March 4: Modlyn engine-shaft is now straightened down and enlarged ready to receive partition, ladderway, main rods, and pumps, which we shall put in as soon as possible. The men who were sinking the winze below the 15, east of Griffith's shaft, are this week stopping east and west of the said winze, where the lode is worth on an average 2½ tons of lead ore per fm. We have agreed for T-lab, pitch, and pollies, which we are daily expecting at Mold Station. The new engine is in motion to-day, and we have put strong rope on the drum, with which we can put the pitwork in; this we consider a great advantage, for we always feared doing it with the steam winch, and the small rope on it. Our monthly sampling of 25 tons of lead ore will be ready about the 17th inst. The clearing and timbering of the adit level is going on as usual.

**PARYS COPPER CORPORATION.**—March 1: Setting Report: The 90 cross-cut south, by eight men, the month, at 13/- per fathom. The ground here has changed for the better, and we have the driving at 11/- per fathom less than last month. The forebore has considerably improved this last day or two, now worth 2 tons of copper ore per fathom, with every appearance of further improvement. The 90, east of cross-cut, by four men, at 7/- 10/- per fathom. The ground in this end is mixed with peat, sulphur, and patches of copper ore, presenting a promising appearance. We have let two tribute pitches to 12 men, one pitch at 14/- per ton, and the other at 15/- per ton.

**PARYS CORPORATION.**—T. Mitchell, March 4: I am just up from underground, and I am pleased to inform you that the lode in the 90 south is still improving. It is over 6 ft. wide, and will yield 3 tons of copper ore and 2 tons of sulphur per fathom, with every appearance of further improving; in fact, it is a strong fine looking lode. I shall set it again to-morrow, and if any further change for the better will give you a wire. The driving east of cross-cut, towards Colonel's shaft, continues much the same as stated in my last. The pitches continue to look very well. We sampled this week 250 tons of copper ore.

—March 5: Telegram: I am now come up from underground. Lode in the 50 south nearly 7 ft. wide. Further improved since yesterday.

**PENHALLS.**—R. Davey, S. Bennetts, Feb. 28: In the 80 fm. level, west of engine-shaft, no lode has been taken down during the week, but will be come down in some of our best ground. We have quarried a sufficient quantity of stones for the loading of the new winding engine and the engine-house, and for the very boisterous weather should have commenced building this week.

On Wednesday last we sampled, for sale to-morrow, 50 tons of blends. We shall sample the usual parcel of 50 tons of lead ore this day week.

**PENNANT.**—March 4: I am glad to say that all our stoves have much improved, and are turning out a good quantity of mineral. In the driving of the 80 west I feel no doubt but that we have entered into a good lode, which will be of utmost importance to us. The carbonate is fully 8 in. wide, improving

as it does now.

**PHOENIX UNITED.**—J. Truscott, March 3: Our monthly setting on Saturday last passed off very satisfactorily. The mines continue to produce the usual quantity of tin. A detailed report will be prepared against the general meeting to be held on the 11th inst., a copy of which will be afterwards sent to each shareholder.

**POLROSE.**—W. Bennetts, C. Roach, March 3: Last Saturday we set a bargain to eight men and four boys, to sink the engine-shaft 9 ft. below the 80 for bearings and cistern, to cut cistern plat, put down bearings and cistern, fix a stand, remove present column of pumps, and to do all other necessary work in connection therewith preparatory to sinking the shaft to the 90, for 37/- This work we calculated would take about three weeks, and the men so far are making good progress, so that we anticipate being able to commence sinking to the 90 within that time. We consider our prospects in the 90 to be exceptionally good. The lode in the 80 for several fathoms is of a strong and masterly character, more settled, and presenting a more favourable appearance than in the level above. Should the lode continue to improve down from the 80, below which nothing has been done, there will be a good piece of ground between that level and the 90 fathom level.

**PRINCE OF WALES.**—John Andrews, March 3: In the deep adit cross-cut north we have intersected a branch 1 ft. wide, composed of quartz, capel, mundic, and spotted with yellow copper ore.

**ROMAN GRAVELS.**—A. Waters, March 4: In the 125, south of new engine-shaft, the portion of Roman lode in the drivage is about 7 ft. wide, but there is more lode standing on the hanging-wall side to be shot down in due course; the matrix of the lode is a beautifully white carbonate of lime, and the stones of soft galena intermixed with the spar shows an improvement upon the ground seen adjoining the new engine-shaft at the 110. It is usual to see the main ore course on the east or hanging-wall side of the lode, and as we intend stripping down the vein here to full width this question will shortly be made clear to us. The 110 north, where we are shooting into the east side, shows that more lode is standing in that direction, and the men will go on stripping the vein to the hanging-wall without delay. The 110 south is now being driven by the aid of a machine-drill on a lode 3½ to 4 ft. wide, composed of spar and lead ore of a promising character. The winze started some time ago in the 95, in advance of the 110 south, is suspended on the part of the water. The lode in the said winze is 4 to 5 ft. wide, worth 2 tons per fathom. The 95 cross-cut, west from old engine-shaft, is being driven towards the saw-pit lode, and it is calculated that 6 or 7 fms. further driving will intersect it. There are two other strong lodes to the west of saw-pit vein, which we purpose to reach by the extension of the cross-cut in question; all these lodes are underlying towards the old engine-shaft, and we look forward to the development of this part of the mine with considerable interest. The 95, south of new shaft, on middle portion of the lode, is worth 1 ton per fathom. The 80, south of Bettom's winze, south of new shaft, is worth 2 tons per fathom. The 80, north of said winze, on east part of the lode, is worth 3 tons per fathom. The 65 south, on middle portion of the lode, is worth 3½ tons per fathom. The hanging-wall division of the lode, which is standing along the drivage for about 18 fms. in length, is worth 1½ to 2 tons per fathom, and will come down as the stope advance southward. But the main part of the Roman lode is standing for 20 fms. in length to the west of the said level, and we are now driving a cross-cut to develop it; we bored 6 to 7 ft. west by way of trial, and expect to get the cross-cut into the great lode, and to ore ground in 3 to 4 ft. further driving. The stope generally are yielding ore in quantities equal to the average of the last twelve months. We have to-day sampled 200 tons of lead ore and 25 tons of blends, for sale next week.

**SOUTH DARREN.**—Henry James, March 4: The lode in the 110 east is more composed of spar, and not so good for lead this week, though from appearances it will again improve. In the west end the lode is strong, with a little mixture of lead and copper ore. The 110, east from winze, is hard, lode composed of spar, with a mixture of lead ore. The 100 west is worth 1½ ton of lead ore per fathom. The lode in the 110, east from the 90 winze, is standing by the side of the level, and will not be taken down until the communication is effected. No. 1 stop in back of the 100 is worth 2½ tons per fathom. No. 2 stop is worth 1 ton per fathom. No. 3 stop is worth 1½ ton per fathom. No. 4 stop is worth 1 ton per fathom. No. 5 stop is worth 10 cwt. per fathom. In the 90 we are in course of clearing the stuff, and shall soon resume this driving. The stope in back of the 50 is worth 12 cwt. of lead ore per fathom. The tribute pitches are producing their usual quantity of good average ore-stuff. We have fixed the new lift from the 90 to the 100, and put down the old one to the 110, and are now preparing to put down skip-road to the bottom. The drawing and dressing is being pushed forward, and we have a fair supply of water. All the machinery is working well.

**SOUTH D'ERESBY MOUNTAIN.**—W. Bennetts, March 4: Last Saturday the men completed the easing down of the shaft to the bottom. They have now commenced cutting the plat at the bottom, which I hope will be completed next week, when we shall at once commence driving north and south on the course of the lode.

**SOUTH TOLCARNE.**—Wm. Rich, Feb. 28: The cheque for the pay came duly to hand, and the men have been paid. There is a little more water coming from the end of the 36 cross-cut, which is a favourable indication. The lode in the 36 end east is opening out wider, and is letting out water freely.

**SOUTH TOLCARNE.**—Wm. Rich, Jas. Knottwell, March 3: The ground is favourable for driving in the 36 cross-cut south, and rather more water than usual coming from the end. The lode in the 36 east is larger and better defined as we leave the influence of the cross-course.

**ST. PATRICK.**—Wm. Francis, March 3: We have thoroughly repaired the shaft and laddrad road, and are now clearing up the 120 yards level preparatory to resuming this drivage.

**SOUTH WHEAL CREBOR.**—John Goldsworthy, March 4: The driving north-east in the 15 to towards the north lode on the caunter lode is progressing favourably; the lode is 2½ ft. wide, composed of quartz, prian, mundic, and producing rich stones of copper ore, with an increase of water. The pit work has been changed, and works well. The sinking is being forced on with all speed to reach the lode in as little time as possible.

**SOUTH WHEAL FRANCES.**—A. T. James, March 3: There is no change in Pascoe's shaft, or in any of the levels since reported last week. The improvement in the 135 west is still very good, worth 30/- per fathom, and seems to be extending both east and west from this point. The 175 west will now be urged on to intersect this run of rich tin ground, where we have 70 fms. above, and an unlimited number in depth, and about 300 fms. in a westerly direction. The new whim is working well, and more than the usual supply of tin ore is being drawn from surface.

**TAMAR.**—R. Goldsworthy, March 3: Saturday was pay and setting day, when the following bargains were set:—To drive the 37 south, by four men, at 7/- 10/- per fathom; the lode is 2 ft. wide, producing 4 cwt. of silver-lead and 3 tons of fluor-spar per fathom; a very promising lode. To drive the 27 south, by four men, at 7/- per fathom; here we have intersected another part of the slide with a very rapid underlie north, 5 ft. in 6 ft., which we think has shifted the lode a little further east. To sink the winze in the bottom of this level, by six men, at 9/- per fathom; the lode is 2 ft. wide, producing 5 cwt. of silver-lead and 3 tons of fluor-spar per fathom. Four tribute pitches, by eight men, each at 9/- per ton for silver-lead; 14/- and 18/- per ton for fluor-spar.

**TANKERVILLE.**—Arthur Waters, March 4: The new shaft going down on pump-sump is now about 23 fms. deep; ground hard and wet. The other parts are just as described in my report of the 26th ult. We shall sample again next month.

**TEESDALE.**—J. Slack, Feb. 26: West-End Forehead: This working is gradually getting wider. The west cheek is turning more and more westward, so much so that we have left the east cheek altogether, on account of the great width it is. There is a lively lead of ore by both cheeks, but not sufficient, and there is also ore sprinkled and in pockets in various parts of the forehead. There is a great change in the vein altogether, which most probably arises from something we are likely to come up to in the intersection of some strength from one side or other. Its appearances are everything that can be desired, and I think a little richer than last week. No. 2 is now so much improved that is now as good and profitable working as we have ever had. I think No. 3 is poorer at the highest point we have reached. There is still fair ore at each end. Dressings are getting away pretty well again. They have had some poor house during the week, mostly forehead house. There are 9 tons of ore ready dressed, which will be removed to Middleton on Friday, the 27th instant.

**TEMPLE.**—March 4: There is no change in the appearance of the lode in the end of No. 2 level the cross-cut north has been commenced, and will be continued with all speed to intersect the main and other lodes, which run parallel with the Temple lode; the ground in the cross-cut is of a very favourable character and hard. In No. 1 level the men have just commenced to sink the shaft at the west end of the course of lead, which was passed through by that level. The air-compressor and air-pipes having been arranged it is proposed to make a trial of the boring-machinery in No. 2 cross-cut at the end of the present week. The dressing and other surface operations are going on as well as the state of the weather will permit.

**TIN-Y-FRDN.**—E. Jones, March 2: We are going on with the stopeing as we were before. The pure blonde holding as good as it was, but the lode seems to get narrower as we go up, and the mixed part is not quite so rich for blonde.

**WEST ASSHETON.**—J. Garland, March 3: The 70 fm. level west was driven last month 5 fms. 6 in., making a total of 39 fms. from boundary cross-cut; the lode is about 15 in. wide, composed of hard quartz, containing spots of lead ore and blonde. Before proceeding further it is desirable to put up a rise to the 80, to prove the lode under the good ore ground goes down in the 60, and for ventilation. The 60 west is poor and unpromising; the lode is very small. We shall cross-cut a little south before driving any further west, to see if there is any more lode in the footwall. Hunt's cross-cut was extended 5 fms. 5 in.; the ground is hard, and without any material change. The length of the cross-cut is now 20 fms. 4 ft. 9 in. There is one tribute pitch working in the back of the 60, and yielding lead ore in paying quantities. The stope in back of the 50 is yielding about 1½ ton of lead ore to the fathom. The 40 west was driven 6 fms. 3 ft. 1 in.; the lode is 6 in. wide and poor. A little water issues from the end. No. 2 stope, in back of the 40 west, yields about 2 tons of ore per fathom; ground stopped last month, 2 fms. 1 ft. 1 in. No. 4 stope produces ½ ton of ore per fathom; ground stopped, 7 fms. 1 ft. 6 in. This stope is going up under a good course of ore in the 30,



MARCH 6, 1880.]

## THE MINING JOURNAL.

265

development in driving the several levels towards West Phoenix. Already Phoenix United Mines have given in profits about 180,000*l.* to 200,000*l.* History may here repeat itself, as the mines are very rich and extensive. West Phoenix shares have been in active demand during the week at 2*½*, 2*¾*. The magnificent lodes discovered and now being operated on, 10 ft. to 12 ft. wide, are such as have not been found in the Cardon district since the wonderful discoveries were made some years since at South Cardon, Marke Valley, Phoenix, and other neighbouring mines. It is said that nearly all the mine managers and agents of the surrounding mines are shareholders, thus testifying their high opinion of the discoveries and appearances of the lodes now being developed. Capt. John Truscott, the able manager of the Phoenix Mines, writes, respecting West Phoenix Mine, that the set adjoins the western boundary of Phoenix United Mines, and extends west on the course of the same lodes about 700 fathoms, stretching from north to south 400 fathoms. About 30 years ago some unimportant operations were carried out by Mr. Vatcher, in search of copper, and a shaft sunk 30 fms.; a lode was found 200 ft. per fathom for tin. At this period the tin was but little thought of in the district, and the party being in search of copper operations were soon suspended. The great lode now seen in the gully, close to the eastern boundary, is quite 12 ft. wide, composed chiefly of capels and peach, intermixed with pyrite, and containing tin throughout, having a most promising appearance, and identical with the great tin lode of Phoenix. At Phoenix United Mines there are five ends driving west of new engine-shaft (their most westerly shaft) towards West Phoenix, all in productive ground, the lodes being from 3 ft. to 12 ft. wide, and increasing in value as they advance west. From the fact of the lode being worth 30*l.* per fathom at the West Phoenix eastern boundary he believes if this property is worked in a spirited and miner-like manner it will prove to be a lasting and profitable mine, equalling in value the Phoenix United Mines. There is considered to be no doubt that West Phoenix will become a great and good dividend-paying mine.

Yorke Peninsula, 2 to 2*½*; ditto, pref., 1*½* to 2*½*; the sinking of Hall's shaft on the Kurilla lode to the 67 has been set. Captain Anthony intends to intersect Morphett's lode, drive under the engine-shaft, and let the water down to the 55. Morphett's engine is likely to do all the draining on both lodes to the 80 unless they have an unexpected influx of water. The 200 tons of ore ready for sale at last report have been sold. There are 130 tons of 17 per cent. and much low class ore on hand.

Missouri's Lead, 10 to 11; advices received this week state that the sinking of the master shaft is going on regularly and satisfactorily; the ground continues to improve; all the machinery is working nicely; the Cornish pump is doing its work well, and gives great satisfaction. The machinery and pump for St. Clair shaft are being completed as fast as possible, and no time will be lost in setting the same. Lead is firm in St. Louis at between 27*l.* and 28*l.* per ton.

At a board meeting of the Tolima Gold Mining Company, on Wednesday, a dividend of 4*l.* per share was declared on the ordinary "A" share capital of the company.

Richmond, 12*½* to 13; the usual telegram from the mine at Eureka, Nevada, states that the week's run was \$52,000, from 866 tons of ore. During the week the refinery produced dore bars to the value of \$50,000. No. 2 furnace being out of order, No. 3 was to be started up on Wednesday to replace it. The manager (Feb. 11) writes that operations, both in the mine and smelting works, have been carried on with the usual regularity. No. 11 chamber is looking very well in the south-western end, and promises to yield a large quantity of ore. The No. 12 chamber is not looking so well as it was; no much work is being done in this chamber at present. No. 10 is looking better in the southern end, where there is a good breast of ore exposed. No. 14 chamber is not looking so well as it was in the northern end; the south end is about the same. No. 15 chamber is looking very well, and is improved since last report. The furnaces are in good working order, and smelting the average quantity of ore. All the machinery, both in mine and smelting work, is in good working order.

Ruby and Dunderberg, 4 to 4*½*; the cross-cut towards the Home Ticket has been advanced during the week 20 ft. The ground is more favourable for progress. Good ore continues to be extracted from the sinking in the Home Ticket. The returns of ore now being made are all the result of operations of an exploring nature, and are already going far towards meeting the costs of the mine. Dividends at no distant period may, it is said, be looked for.

Hultafall, 1*½* to 2; satisfactory reports from the mine have been received, and a parcel of lead ore has arrived, about 30 tons, and is now in course of sale. Large quantities of blonde are being raised, and stored ready for shipment as soon as the navigation opens.

In Gold Washing Companies shares there has been a little more business doing, but the number of transactions is still very small. Placerville, 2*½* to 2*¾*; the new hoisting works are doing satisfactory work, and ore in plenty is being extracted for the mill, which is working well.

In Lead Mine Shares there has been very little doing, but prices are in most cases fairly maintained. Van, 20 to 21, have been flattered, the sale of lead ore this week not realising so much as was expected. The mine is looking much the same, the 200 tons of lead and 75 tons of blonde realised 2910*l.* 5*s.* Minera, 12 to 13; the much better price obtained for lead and blonde should allow of a good dividend next month. Great Laxey, 18 to 19; the half-yearly meeting will be held next month, when, no doubt, owing to the increased price of silver-lead and large blonde sales, a much better quarterly dividend will be announced.

Tankerville, 5*½* to 6; according to the manager's report, and the indications now presenting themselves in several points of development, some important discoveries are shortly expected. Roman Gravels, 11*½* to 12, and the mine improving in driving the levels south. A dividend is shortly expected to be declared. Leadhills' share, firmer, at 3*½* to 4, and the levels driving on Brown's and other lodes improved.

Mineral Corporation, 12 to 13; everything at the mine is reported to be going on satisfactorily; it is said that arrangements will now be made to complete the purchase of the boring machinery, which has recently been idle. In a circular just issued by Mr. Schurman, the maker of the machinery in question, there is, amongst numerous others, a favourable testimonial from Capt. William Bennett, the manager of the mines of the Corporation, in which (Dec. 4) he says—"I am pleased to tell you although we have made slow progress for the last eight or ten days that it is no fault in the machines; nothing can work better than they have done, but we have had a bad piece of ground to go through, but I am pleased to say ground to-day is much more favourable, and hope now to make much better progress." The district is said to be one in which lead can everywhere be found, but rapid working on a large scale is absolutely necessary.

Frongoch, 4*½* to 5*½*; this mine has just been inspected by the freeholders' agent, and his report is satisfactory, as it goes to confirm all that has been said in favour of the mine, and states that the prospects have improved since his previous visit, and that great discoveries of ore have been made. The sales of ore from this mine for February realised 215*l.* 2*s.* and the working costs, including wages, rent, royalty, directors' fees, and all other charges, were stated to be less than 110*l.* 0*s.* thus leaving a balance in favour of the mine of over 100*l.*

Ystwith, 1*½* to 1*¾*; the recent improvement at this mine are stated to be encouraging, and it is expected that important discoveries may soon be made upon the Penguelan lode.

Mona, 13 to 15; the lode in the 55 has further improved, and is now worth 6 tons per fathom. A second cargo of bluestone is ready for shipment, and a large quantity is ready on the mine as soon as vessels can be obtained to take it away.

Gwynnynd, 5*½* to 6; the explorations are being vigorously pushed forward, with satisfactory results in ore returns and developments.

Florence, 4*½* to 5; the pumping and winding machinery for the above mine is going down next week, and operations are to be pushed forward as quickly as possible under the personal superintendence of Capt. Wm. Hoskins, of Newton Abbot, and the valuable lodes of silver-lead and blonde known to exist in this property, already partially laid open, are to be vigorously worked. The assays from samples taken from the lodes, yield nearly 44 ozs. of silver to the ton in the silver-lead lode, and from the blonde lode 62 per cent. of metallic zinc.

[The closing quotations being given in the Share-List on the last page of the Journal it is unnecessary to repeat them here.]

At Redruth Ticketing, on Thursday, 1181 tons of ore of 6*½* average produce, and containing 76 tons 10 cwt. of fine copper, were sold for 4621*l.* 6*s.* 6*d.* being 3*½* 18*s.* 6*d.* per ton of ore; 12*s.* 1*d.* per unit, or 60*s.* 8*p.* per ton of fine copper in the ore, and an average standard of 102*s.* 17*s.* Subjoined are the particulars of the two last sales:—

Date. Tons. Standard. Produce. Per ton. Per unit. Ore copper. Feb. 19. 2576 ... 2*l.* 10*s.* 8*p.* 6*s.* 6*d.* 2*l.* 4*s.* 4*p.* 2*l.* 6*s.* 14*p.* 2*l.* 1*d.* 60*s.* 8*p.*

March 4. 1181. 10217 0 ... 6*s.* 6*d.* 3*½* 18*s.* 6*d.* 12*s.* 1*d.* 60*s.* 8*p.*

Compared with the last sale the advance has been in the standard 17*s.* and in the price per ton of ore about 1*s.* 2*d.*

GAS SHARES.—The principal business in these shares, according to this evening's report of Mr. W. L. Webb, of the Stock Exchange and Finch-lane, has been in Bombay, 5*½* to 6*½*; Commercial, 8*½*; Continental 7*½* per cent. pref., 2*½*; ditto, new, 18*½* to 19*½*; European, 17*½* to 19*½*; ditto, new, 8*½* to 9*½*; Gas Light, A, 17*½* to 18*½* ex div.; ditto, H, 7 per cent., 12*s.* to 13*s.* ex div.; ditto 4 per cent. debentures, 100 to 101; Imperial Continental, 17*½* to 19*½*; Hong Kong, 15*½*; Malta and Medit., 2*½*; Para, 5*½*; Rio de Janeiro, 2*½* to 2*¾*; Phoenix, 3*½*; ditto, new, 11*½* to 11*¾*. Gas stocks are very firm. For closing prices see list on last page of Journal.

TRAMWAYS.—The closing prices of this evening, as quoted by Mr. W. Abbott, of Tokenhouse-yard, are given in tabular form in the last page of the Journal.

INSURANCE SHARES have, according to this evening's report of Mr. W. L. Webb, of the Stock Exchange and Finch-lane, been dealt in as follows:—Alliance, 33 to 33*½*; British and Foreign, 18*½* per cent.; Commercial, 20*½* to 20*¾*; Guardian, 6*¾*; Indemnity, 10*½* to 10*¾*; Imperial Life,

15*¾*; Marine, 54*½*; Law Fire, 13*½*; London, 63*½* to 64; Lion, 3*½*; Liverpool and London and Globe 1*½*. Annuity, 22*½*; London and Provincial Marine, 4*½* to 4*¾*; Merchant Marine, ½; North British and Mercantile, 4*¾*; Railway Passengers, 7*½*; Universal Marine, 12*½* to 12*¾*. Insurance shares are firm. For closing prices see list on last page of Journal.

\* \* \* With this week's Journal a SUPPLEMENTAL SHEET is given, which contains—Original Correspondence; The Royal Commission on Accidents in Mines (E. Burgess); West of England Gunpowder Company; Pumping Engines; Gold in India; Gold Mining in India—Wynand and California; Don Pedro North del Rey Mine; the Cedar Creek Gold Mines Company; Iron Ore from Swedish Lapland (W. J. Thompson); Mississippi and Ohio Railroad Company; a New Slime Dresser; Rock-Boring Machinery (R. D. Jones); Ore Dressing (W. Nance); Nant Rhys Syndicate; Tin and Lead (G. Budge); Tin and Copper Mines; Parys Copper Syndicate; East Peevor (R. Symons); a rich Mineral County; Wheal Crebor; West Cardon Mine; the Griffin Lode—Bettws-y-Coed; New Fowey Consols (St. Blazey); Devon Great Consols; West Devon Great Consols. Meetings of Public panes; Pandore Lead; Cakemore, Causeway Green, &c. Brickworks and Colliery; Great Dylife, Gawton Copper, West Tolgus, and Frontino and Bolivia (Gold) Mining Companies. Reports from Derbyshire and Yorkshire, Cornwall, Monmouth and South Wales, North and South Staffordshire, North Wales, Salop and Cardiganshire, and Tyne and Wear. Newfoundland Land Company. Foreign Mines, &c.

DERWENT.—The report on the valuable lead mines worked by this company, just made by Mr. John Taylor, is most favourable. He considers that active measures should be taken to increase the output from the great extent of productive ground discovered and laid open within the last two years at the 93 and 95 fm. levels, between Jeffery's and Westgarth's shafts, which is such as will justify the erection of new dressing-floors. He says the plans and sections show the immense extent of productive ground upon the different lodes which have been laid open, and he remarks that it may be inferred from what has already been seen that there remain large stores of mineral wealth to be developed in the property, the returns already made from the limited workings yet opened having realised nearly a million sterling. The cross-cut at 93 fms. deep, to intersect the north lode in the great limestone, is expected to be accomplished in about three months. This lode, with the others, has been very rich in the upper sills, and if found productive in the great limestone there will be 18,000 fms. of it in this sill alone, adding immensely to the available resources of the concern. In addition to this, after driving a long time at the 74 fm. level, it is believed they have just reached the Burnshield Haugh lode, which has yielded largely in neighbouring mines, and should it turn out good here there would be practically an unlimited extent of ore ground on it alone. There are upwards of 800 fms. in length on all the lodes untouched from surface, and the deepest point in any part of the mines is only 95 fms. The late great recovery in the price of lead makes a most important difference, and, with the purchase of the freehold of the minerals (now being carried out) completed, relieving the company from all royalties and rents, this undertaking may be regarded as one of the cheapest and safest investments in the market. In our correspondence columns will be found several letters on the subject, to which we may refer.

BRAZILIAN GOLD MINES (Limited).—This enterprise has been successfully launched under most respectable auspices. As will be seen by reference to the prospectus, which appears in another column, the capital is ample for all requirements, and that the property acquired has every element essential to ensure a great success. It is situated in the richest gold region in Brazil, being about 40 miles from the Don Pedro, 30 miles from the Santa Barbara, and 20 miles from the St. John del Rey. Shallow and imperfect native workings years since resulted in the yield of gold to the value of more than 150,000*l.* from the rock mines alone, which can be worked for many years by means of adits, preventing the necessity of pumping machinery. But upon the company's freehold estate, which is 3 miles long and 2 miles broad, there is also a "mountain of jacutinga," which, according to the testimony of the best authorities, cannot fail to yield highly satisfactory results in the immediate future. The directors are gentlemen of influence and experience; the company, started upon a financial basis that merits success, will have the special advantage of the supervision of Mr. Thomas Tregellas, to whom the shareholders in Santa Barbara owe so much, as under his management profits now exceed 50 per cent. upon the capital. The subscription list for shares at par will be closed on Monday for London, and on Tuesday for the country.

PUMPING MACHINERY WANTED, for pumping about 35,000 gallons per hour from a depth of 100 fathoms. If to be placed underground, engine must be about 36 inch cylinder with plunger pumps of about 11*½* to 12 inch. If above-ground, a horizontal engine of about the same size might do, or if of single-acting Cornish or beam type, the cylinder would require to be about 60 to 70 inch diameter.

Send particulars and price to "Carbon," MINING JOURNAL Office, 26, Fleet-street, London, E.C.

WANTED, the ASSISTANCE of a MINING ENGINEER, to OVERLOOK a SMALL COLLIERY near TAMWORTH (which is under lease), on behalf of the lessors.

Apply to Mr. ARMISHAW, Clerk to the Grammar School Governors, Atherton.

WANTED, for a Mine near Redruth, A GOOD SECOND-HAND ROTARY ENGINE, for drawing purposes, 24, 35, or 26 inch. State length of stroke, and particulars, to Mr. E. ASHMEAD, 62, Cornwall, London, E.C.

TO INVESTORS.

WANTED, CAPITAL to DEVELOPE a SILVER-LEAD and a TIN PROPERTY. Splendid prospects. Excellent returns.

Address, "Devonian," MINING JOURNAL Office, 26, Fleet-street, E.C.

MANAGER WANTED to SUPERINTEND the WORKING of an IRON ORE MINE, near BILBAO, in SPAIN. Preferences will be given to a competent manager, having a knowledge of Spanish. Salary £300 per annum.

Applications, with copies of testimonials, to be addressed to Mr. JAMES ADDIE, Langloan Ironworks, Coatbridge.

FOR SALE, a FIRST-CLASS SECOND-HAND 80 in. CORNISH PUMPING ENGINE, with several 11 ton BOILERS.

Apply, Wm. BENNETTS, Roskear, Camborne.

THE PYRENEES FITTIE MINING COMPANY (LIMITED), HAUTE PYRENEES, FRANCE, requires a MINING CAPTAIN, capable of superintending and laying out extensive Lead Dressing-Floors, and of conducting Mining Operations on a large scale. Good correspondence, with knowledge of French or Spanish indispensable.

Apply by letter only, stating experience and salary required, with copies of testimonials, to Mr. J. R. COONBS, 14, Great Winchester-street, E.C.

THE INDIAN GLENROCK GOLD MINING COMPANY (LIMITED).

Notice is hereby given, in consequence of the LARGE NUMBER OF APPLICATIONS FOR SHARES in this company, the Directors will be UNABLE TO PROCEED TO ALLOTMENT BEFORE MONDAY next, the 8th instant. The letters of allotment and regret will be posted as soon as possible after the allotment is complete.

By order, J. A. MAYS, Secretary.

32, Queen Victoria-street, London, E.C., March 1, 1880.

## SILVER-LEAD MINE.

THE OWNERS of a very promising SILVER-LEAD MINE in DERBYSHIRE, having expended upwards of £1600 in developing the same, are prepared either to DISPOSE OF IT, or to meet with capitalists to JOIN IN WORKING IT.

Apply to M. J. DENYER, Esq., Church Walk, Ulverston; or to view, Mr. RICHARD DUNN, Flagg, near Buxton.

TO BE SOLD CHEAP, an 18-in. cylinder ENGINE, also combined ENGINE BOILER and MORTAR MILL, by Barrows and Stewart; and small WINDING ENGINE suitable for builders. Owner having no further use for same.

Apply to the South Down Metal and Chemical Company (Limited), near Devonport.

FOR SALE, a FREEHOLD PROPERTY, containing a deposit of GOOD BROWN HEMATITE IRON ORE, which can be mined and delivered into South Wales for about 7*s.* 6*d.* per ton.

Apply to PAGEN and Co., Metal and Mineral Brokers, &c., 41, George-street, Plymouth.

GAS SHARES.—The principal business in these shares, according to this evening's report of Mr. W. L. Webb, of the Stock Exchange and Finch-lane, has been in Bombay, 5*½* to 6*½*; Commercial, 8*½*; Continental, 7*½* per cent. pref., 2*½*; ditto, new, 18*½* to 19*½*; European, 17*½* to 19*½*; ditto, new, 8*½* to 9*½*; Gas Light, A, 17*½* to 18*½* ex div.; ditto, H, 7 per cent., 12*s.* to 13*s.* ex div.; ditto 4 per cent. debentures, 100 to 101; Imperial Continental, 17*½* to 19*½*; Hong Kong, 15*½*; Malta and Medit., 2*½*; Para, 5*½*; Rio de Janeiro, 2*½* to 2*¾*; Phoenix, 3*½*; ditto, new, 11*½* to 11*¾*. Gas stocks are very firm. For closing prices see list on last page of Journal.

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## CAPPER PASS AND SON, BRISTOL,

ARE BUYERS OF

LEAD ASHES, SULPHATE OF LEAD, LEAD SLAGS,

ANTIMONIAL LEAD, COPPER MATTE, TIN ASHES, &c.

## NOTICES TO CORRESPONDENTS.

**FLINTSHIRE LEAD MINES.**—Can any of our correspondents speak as to what has of late been done in the matter of South Prince Patrick and St. David's, both lead mining companies, and in the vicinity of the rising Prince Patrick Mine? I fancy the South Prince Patrick was wound-up, but am not sure. Some people at Birmingham had the management of both, but hearing nothing of either for some time past have trusted to your columns for revival of information, if possible.

**WICKLOW COPPER.**—Perhaps your Stirling Correspondent may be good enough, in his weekly letter, to give some information as to what is being done—lodes, quality and quantity of mineral raised here. I have not noticed it of late, but about two years ago your Share List had it, but apparently there were no transactions therein, if I remember correctly.—ADVENTURER.

On reading over your Notes to Correspondents in the *Mining Journal* of Feb. 21, I see it there stated that—"Mine captains are usually working miners, whose superior intelligence has entitled them to be entrusted with the control of a mine." If such is the case, the writer would wish to know what position the mining engineer occupies in British mines? And what is he required to know before he can receive that title? The writer would also wish to know if a foreigner could pass examinations and receive that title without having previously studied in England. The above information would oblige your faithfully—A GERMAN.

**WEST POLGOOTH TIN MINE.**—Perhaps some of your readers can inform me if this company is in existence. The prospectus was advertised in the *Journal* for December last, and it stated that notice of first meeting would be given to applicants, and the meeting published in the *Mining Journal*.—D.

**LIABILITY ON SHARES.**—"J. F. F." (New Cross).—Most of the 12 shares in limited liability are required to be paid up in full on allotment. In both the mines mentioned the shares are fully paid; it is, desirable, however, in all cases to see the prospectus before investing.

**CAPITAL SHARES AND PROMOTERS' SHARES.**—The case referred to in the *Mining Journal* a few weeks since of a company's money being expended to create a market for the promoters' fully paid shares is not an isolated one, as I know from sad experience; but why could not companies be launched on the condition that the whole of the purchase money shall be attached and kept beyond the control of the vendors until the whole working capital is subscribed. If 12,000/- purchase money is to be paid surely the early subscribers should be protected against all their money going to the vendors. It is the absence of this protection that makes it so difficult to raise money at all.—CASH.

**LEAD MINING IN WALES.**—"F. J. C." (Paris).—A large amount of work is being done in the district mentioned, and one or two of the mines have sent ore to market, but no profits have ever been realised. Lead is found all over the mountain, but the veins are very small and irregular, frequently yielding no ore for fathoms, and then having a few feet, just sufficiently encouraging to give rise to hopes for the future. The management is considered good, but the old maxim is not "a good captain makes a good mine," but "a good mine makes a good captain." A year's further trial will, no doubt, be ample, and as the shares are fully paid it is as well to hold.

**OFFICIAL QUOTATIONS.**—"S." (Elllesborough, Tring).—The quotation 2½ to 2¾ in Marke Valley shares in last week's *Journal* was correct. Neither the Stock Exchange Official List nor the other mentioned is altogether reliable; the British Mine list in the former receives very little attention. Thus the Stock Exchange Official List states that Devens Great Consols is in 10,340 shares of 5/- each, with 1/- paid. The Prince of Wales Mining Company, in 2800 shares, 15/- paid, which is alone quoted in the Stock Exchange List, has been defunct for some years, and the property has been more than once sold to reconstituted companies. Marke Valley, so far from being all paid as marked, is a Cost-book concern, and, consequently, each share is liable to call to an unlimited amount. Wheal Grenville (which is really in 6000 shares, with 4/- 15/- paid) is quoted 5173 shares, 15/- 7s. paid; and Wheal Bassett is described as in 512 shares, 5/- 2s. 6d. paid, instead of 6144 shares; and West Chiverton is quoted 17/- 5s. paid instead of 19/- 15s. These corrections might be continued to Asheton, stated to be 2000, instead of 12,000 shares, and others; but as there are here given inaccurate descriptions in the 20 mines (the aggregate number) quoted further reference to the list is unnecessary.

American subscribers remitting by International Postal Order will oblige by advising, if only by writing their names on a post card; as otherwise it is impossible to know whom to credit, as neither the United States nor the English Post Office give the name and address of the remitter.

**Received.**—"A. F." (Cwm Tryf).—The report is too long for us to publish, especially as it has been printed for circulation—"G. K. N." (Wolverhampton)—"J. D." (Paris).—Shareholder (West Devon Great Consols) had better write to Mr. Peter Watson, who will inform him as to the interest he takes in this adventure—"C. R. G." (Bolckow, Vaughan, and Co.)—"Inquirer" (Trebleigh Consols) should write to Mr. T. B. Laws, St. Andrew Chambers, Cornhill, who will communicate all information—"G. S." (Victoria-street)—"H. C. S." (Wallingford)—"Inquirer" (Port Phillip and Colonial Gold)—"R. S."—"Enquirer" (West Devon Consols)—"J. W." (West Polgooth)—"J. B. R."—"J. J. W." (Broad Sanctuary) should have sent all that he wished to be inserted: We have no copy of the matter referred to, otherwise it should have appeared—"An Old Subscriber" (Surface Owners Right to Slimes)—"An officer who has served in Canada and Bermuda"; Next week—"Shareholder" (East Chiverton)—"Enquirer" (Mining in Llanarmon District); Next week—"R. S." (Rocks Tip).

THE MINING JOURNAL,  
Railway and Commercial Gazette.

LONDON, MARCH 6, 1880.

## THE MINING INDUSTRIES OF LANCASHIRE.

During the last few years great progress has been made in the development of the mineral wealth of Lancashire, and frequent discoveries of valuable beds of ironstone have been made. Only a few days since the Scansdale Mining Company tapped a valuable deposit of iron ore on their royalty about two miles from Barrow-in-Furness, and are sinking a new shaft for raising it. Not long since, too, the Diamond drill tapped a rich bed at Scansdale, where none had been found previously. The Furness Iron and Steel Company also met with a large deposit of ore on their Goldmire royalty, near Furness Abbey, and which was pierced in five places without determining its limits. Another deposit was found near the Roanhead Mines, belonging to Messrs. KENNEDY Brothers. These constant discoveries point to the fact that the field of stone is much larger than was anticipated, and show that the beds extend a long way in several directions, and for years to come will be able to supply the many furnaces in Barrow, as well as in other districts. The deposits of hematite are found in the Lower Silurian and in the mountain limestone, following the dip as veins, and filling irregular hollows. At Furness the deposits, as a rule, are in the mountain limestone, and are considered to be younger than the carboniferous limestone, and would appear to have originally been placed as carbonate, partly displacing the limestone, and partly in previously existing caves. There are about 20 mines producing the red hematite, the most productive being the Park Mine, belonging to the Barrow Hematite Iron Company, which in one year yielded ore of the value of 327,881. Next to it is the Lindal Moor Mine, of Messrs. HARRISON, AINSLIE, and Co., which in 1878 gave ore to the value of 145,852, having in that year exceeded the tonnage raised at the Park Mine. The Stank Mine of the Barrow Hematite Iron Company also yields a heavy tonnage of stone. At one time it was thought coal would be found in the Barrow district, and of so much importance was this considered in connection with the furnaces and steelworks that borings were made at Rampside by means of the Diamond drill, but whilst some interesting geological information was obtained the mineral sought for was not met with, much, of course, to the disappointment of those who were interested in the matter. As showing the progress made it may be stated that the quantity of ironstone raised in Lancashire in 1855 was 336,828 tons, whilst last year it was about 1,000,000 tons. The furnaces in the district consume about 750,000 tons, and the remainder is sent into other parts of Lancashire, Staffordshire, Yorkshire, and South Wales. The Barrow Hematite Iron Company have seven mines at Dalton, whilst the Furness Steel and Iron Company have eight or nine at Dalton, Ulverstone, and other places. The following is the tonnage of stone raised in the county for some years past, with the value:—

	Tons.	Value.
1871	931,048	£1,163,810
1872	852,064	1,063,186
1873	926,497	1,157,885
1874	914,357	1,132,595
1875	834,484	625,863
1876	984,460	728,505
1877	998,012	651,169
1878	984,781	601,891

It will be seen that in 1878 the average price of the hematite was considerably more than 1/- per ton, whilst in 1878 it was not quite 12s. 6d. per ton. At the present time the price ranges from 31s. to 34s. per ton, so that recent discoveries on old royalties are really valuable. The works at Barrow are amongst the largest in the

kingdom, and are well laid out in every department. There are 16 blast-furnaces, 14 of them being in a row, and something like 2000 tons of metal are taken weekly from those working to the Bessemer converters, of which there are seven, with a capacity of 8 tons each. Having the converters close to the furnace has been found of great advantage, as there was more regularity as regarded the furnaces, for as Mr. SMITH, the courteous manager, said so sensitively was the Bessemer converter that with a very small alteration in the proportions of the various classes of hematite ore used the difference in the steel produced ran up occasionally to 25 or 30 per cent., so that when that occurred they had only to look to the managers of the furnaces for an explanation and alteration. The Barrow Company has long been noted for its Bessemer rails, and the output is probably much larger than from any other establishment in the kingdom. A good deal of the fuel used in the furnaces and the other branches is obtained from pits belonging to the company. The Wigan Coal and Iron Company have 10 furnaces, but not all in blast, and send the pig away in its raw state. The production of Bessemer pig must now be most profitable at the works, ranging from 67. to 77. 10s. per ton, whilst the company have their own fuel close at hand. The North Lonsdale Company have three furnaces at Ulverstone; they are 75 ft. high from the level of the hearth to the charging plates, and the dimension of the bosh is 23 ft. Each furnace is cased with wrought-iron plates down to within 2 ft. above the tuyere arches. The Carnforth Hematite Company have six furnaces, but of course they have not all been in blast, and have two six ton Bessemer converters. The production of pig-iron during the last eight years was as follows:—

	Furnaces in blast.	Tons.
1871	34	520,359
1872	35	524,041
1873	36	529,271
1874	33	488,672
1875	31	558,780
1876	30	552,984
1877	33	624,189
1878	30	616,255

Lancashire also produces a good deal of fire-clay found in connection with other minerals, the last yearly return showing an output of 124,000 tons, or about 1-12th of the entire produce of the kingdom, according to the returns furnished by the Inspectors.

The Lancashire coal field is one of the most interesting we have

from a geological point of view, and though considerably less in area than that of Yorkshire, it produces a much larger tonnage of coal. The coal in several districts was worked by the Romans, for Wigan was a Roman station. A few years ago, when driving a tunnel to convert the course of the River Douglas, the Arley Mine seam of coal was met with, and was found to have been mined in a most singular manner. The coal was found to have been excavated into a series of polygonal chambers with vertical walls, opening into each other by short passages, having the appearance of a honeycomb. WHITTAKER states that there is strong evidence from discoveries near Manchester that the Britons had made use of coal in that neighbourhood, and also refers to the existence of fragments of coal in the beds of sand under the Roman Road. In the Wigan district the measures are divided into belts, bounded by parallel faults, which range N.N.W., having throws varying from 150 to 600 yards, the principal ones being the Shevington fault, the Cannel fault of Ince, and the Great Haigh fault. The fault at Red Rock Bridge, north of Wigan, and that which bounds the small end field, near Rainhill, are remarkable for very flat slopes, the angle being about 25° from the horizontal in each case. In the Wigan district there are no less than 16 seams of coal, varying in thickness from 2 to 7 ft., some of them being of an inferior quality. The most valuable is the Cannel seam, a splendid coal seam, being from 1 to 3 ft. in thickness, the next being the Arley Mine, 4 ft. thick. This seam appears to be identical with the Silkestone coal of South Yorkshire and Derbyshire, so that the bed, which at no place has been found more than 5 ft. 6 in. thick, has originally spread over a tract of country from 10,000 to 12,000 square miles in extent! Near to Manchester there is a small coal field, there being seven beds, the thickest of which is only 4 ft. Below the beds that are being worked the seams, no doubt, are much thicker, but to reach them the shaft would have to be 500 or 600 yards deep. In the neighbourhood of Burnley there is a seam of coal 6 ft. thick, and an impure cannel rather more than 2 ft. in thickness. The progress made in the development of the coal will be seen from the undermentioned figures, showing the tonnage raised at different periods:—

	Collieries.	Tons of coal.
1855	357	8,950,000
1859	380	10,660,500
1869	392	13,995,500
1872	424	16,100,000
1875	588	17,930,050
1877	517	17,621,531
1878	529	18,061,411

Lancashire now contains the deepest mines in the United Kingdom, that at Rosebridge, near Wigan, being 815 yards from the surface, whilst there are several shafts varying from 400 to 600 yards in depth in the western part of the coal field. The quantity of available coal in the county down a depth of 4000 feet has been estimated at 5,46,000,000 tons, so that at the present rate of production there will be enough coal to last nearly 300 years.

## STEEL FOR BRIDGES AND RAILWAY STRUCTURES.

The evidence given on Saturday at the Board of Trade enquiry relative to the Tay Bridge disaster was certainly of a most surprising character. Some of the supporting columns, it appears, were made of inferior iron from Cleveland, and of different thicknesses. One of the witnesses, RICHARD BAIRD, a moulder, said he saw some of the columns of unequal thickness—one side might have been between three-eighths and a quarter of an inch, and the other between one and a-quarter and one and three-eighths. Another witness, ALEXANDER HAMPTON, who had been a moulder for 27 years, said he never saw worse metal than was used in casting the columns. He did not know if the defective columns, which were numerous, had been taken out for use in the formation of the bridge, but he believed they were—at least they were never broken up. Then Roman cement, it was stated, was used for filling up cracks and other defects in the columns. These marked defects, assuming that the evidence given is substantially correct, and there does not appear to be any ground for questioning it, brings us to the consideration of the question of the use of steel in railway structures, as being a much stronger and more efficient material, and consequently ensuring a larger amount of safety. Not so long since the Board of Trade appointed a committee to consider the practicability of assigning a safe co-efficient for the use of steel in railway structures. Having given the subject the most serious attention the committee in their report recommended that steel should be used in engineering structures under certain conditions. These were—"1. That the steel should be cast or made by some process of fusion, subsequently rolled or hammered, and of a quality possessing considerable ductility and toughness, and that a certificate to the effect that the steel is of this description and quality should be forwarded to the Board of Trade by the engineer responsible for the structure.—2. That the greatest load which can be brought upon the bridge or structure, added to the weight of the superstructure, should not produce a greater strain than 6½ tons per square inch.

The committee, in conclusion, remarked that in recommending a co-efficient of 6½ tons per square inch for the employment of steel in railway structures generally they are aware that cases might, and probably would, arise when it would be proposed to use steel of special make and still greater tenacity, and when a higher co-efficient might be permissible, but they thought those cases must be left for consideration when they arose, and that a higher co-efficient might be then allowed in those instances where the reasons given appeared to the Board of Trade to justify it." Such are the views of Sir JOHN HAWKSHAW, Mr. W. H. BARLOW, and Colonel YOLLAND, and we think that those who are responsible for the construction of railway bridges and similar structures would do well to take them into earnest consideration. We believe, also, that there would be very little difference in the cost, seeing that the weight of a steel bridge of any

span would only be about half of what a wrought-iron one would be, and would be able to carry the same load at least. Cast-iron, as shown by the Tay Bridge disaster, is a dangerous material to use, and steel can be more relied upon than iron of any description. Experiments that have been made by some of our ablest engineers and practical iron and steel makers prove that iron is not to be compared with steel in endurance and ductility, more especially the mild Bessemer and that made by the Siemens' process. At present we believe the only bridge constructed entirely of steel is that over the Sota Canal, in Sweden. Yet there is no doubt but that we shall now find steel more extensively adopted in all railway structures, and that it will be about as cheap. However, the lesson taught by the Tay Bridge calamity should not be lost on those who will have the ordering of the new structure, and the directors should take it into consideration whether the adoption of steel, to a considerable extent at least, may not be found equally as economical as iron, whilst at the same time it would be the strongest, and consequently the safest.

## OLD RAILS.

A slice of good luck has been secured by the railway companies of Great Britain, France, the United States, and, indeed, of all the countries in the world in which railways have been established for any lengthened period. We refer to the sale upon very advantageous terms of large quantities of old rails and scrap-iron, which twelve months since were probably regarded as semi-valueless. The full benefit of the remarkable change in the value of these old materials has probably not yet become fully apparent, but in a few months we may expect to see very important sums encashed under this head. It will be remembered that Mr. H. V. POOR recently gave some remarkable evidence before the Ways and Means Committee of the United States House of Representatives with reference to the chilling effect which he considered the present exorbitant price of steel rails would have upon the American railroad interest, and upon the work of American railroad construction. The opponents of Mr. POOR have since been raking up statistics to show that the increased value of old materials has very nearly kept pace with the increased price of steel rails, so closely, in fact, that as regards old established railroads the extra cost of steel rails is virtually only about \$150 per ton. This may be true so far as old established lines are concerned, but the argument is clearly worth very little when we come to deal with new railroads having no stocks of old materials at all. The pinch of the steel rail shoe upon new American lines is certainly most severe at present, and no amount of ingenious reasoning can explain away the fact.

It appears to us to be the interest of the railway companies of both Europe and America to feed the old rail market with a certain freedom, as it is not at all certain that 1881 will witness a continuance of the high rates now ruling for rails and iron generally. The present activity in the demand must, according to all generally received experience, have the effect of stimulating production, and an augmented production implies, as a general rule, lower prices. Present rates are clearly too high to last; they may continue one year, two years, or even three years, but a reaction—and a sharp reaction, too—is one of the inevitable eventualities of the future. Railway directors will, then, do well to make hay while the sun shines, and to turn ugly and dilapidated heaps of old materials into little piles of glittering sovereigns and crisp bank notes.

The experience of the last few weeks with regard to old materials shows the importance of careful utilisation by railway companies of all such resources. It is the companies which bring care and economy to bear upon every detail of daily management which pay satisfactory dividends upon their ordinary stocks. But we concur with the directors of the London, Brighton, and South Coast Railway Company in thinking that the profits which have unexpectedly poured into railway coffers of late, in consequence of the advantageous sale of old materials, ought not to be applied thoughtlessly and recklessly to the payment of increased ordinary stock dividends, but that such profits should be added to reserve or insurance funds calculated to give more general stability to railway working. The London, Brighton, and South Coast is following the example of the South Eastern and forming a good substantial reserve, so as to avert or mitigate the consequences of some special misfortune or some special accident. We think both these companies are wise in their generation.

## THE COAL AND IRON TRADES OF SPAIN.

Few countries are more richly blessed than Spain, and in none has the perverseness of man done so much to thwart the beneficent designs of Nature. Endowed with mineral resources of extraordinary value, and which have been known to the world for over twenty centuries, Spain is, nevertheless, to a large extent dependent on abroad, and particularly on England, for a supply of those articles which she herself possesses in such great abundance. Since the Carthaginians went thither for copper, tin, lead, and silver Spain has been now and again applied to for mineral products, but even to-day—2000 years after HANNIBAL armed his soldiers with weapons of Spanish metal—the Spanish mineral trade is still in a feeble and unpromising infancy. Indeed, throughout all the meridional districts of Europe the minerals lie dormant, save only where northern enterprise utilises them as auxiliaries. In the South of France, on the slopes of the Pyrenees, there are rich deposits which are but imperfectly opened up. One of the reasons of this is, perhaps, difficulty of transport, though these are too trifling to account for such a stagnation of enterprise. M. ALLAIN TARGE, speaking in the French Chamber during the current Tariffs debate, took the first-mentioned view. He said—"The minerals of the Pyrenees are sufficient to supply a great portion of the works of the South and Centre, but the railway tariffs render their transport almost impossible for us. The department of the Pyrénées-Orientales has some most important beds. That of Fillol notably is very considerable, and contains a mineral of 45 per cent. of iron and 3 per cent. of manganese. We buy it at from

figures (those for 1874, for the publication of official returns proceeds slowly in Spain), it will be seen that in that year Oviedo produced 374,914 tons; Cordova, 176,336; Palencia, 119,259; Seville, 13,509; Girona, 6380; Leon, 4721; Burgos, 230. These 695,340 tons for 1874 express a value of 8,576,765 francs, or an average of 12.33 francs per ton. This production requires the aid of 6738 workmen, and 32 steam-engines of a power (globe) of 658 horses. During the same year the production of lignite amounted to 13,346 tons, to the value of 250,523 francs, or an average of 18 francs 75 centimes per ton. Lignite comes principally from the district of Santander, which supplies 2022 tons; Guipuzcoa, 1584 tons; Teruel, 1157 tons; and then follow several other provinces with a production varying from 20 to 243 tons. There were 587 workmen and one steam-engine of 10-horse power employed in the production of this quantity of lignites. At the same period there were in Spain 239 coal pits, and 44 mines of lignites.

The annual consumption of coal in Spain from 1872 to 1874 was 1,800,000 tons, distributed as follows:—Metallurgie and siderurgic industries, 500,000 tons; railways, 190,000 tons; gas making, 110,000 tons; navy, 28,000 tons; merchant marine, 110,000 tons; various industries, 362,000 tons: total, 1,300,000 tons. The two most industrial provinces of Spain, Catalonia and the Asturias, are those which consume the most coal, using 300,000 tons each, and the town of Barcelona alone requires 100,000 tons. Spain is dependent upon England for about one-half of its home consumption. This extraordinary state of affairs not only exists but goes on in the same course, notwithstanding the fact that the coal beds of Spain are provided with excellent outlets. The opening up of these mines of wealth certainly presents a field for foreign capital which might be utilised with profit were the dangers and difficulties which beset industries and enterprise in Spain adequately guarded against. The principal causes of this industrial stagnation are the want of capital, and the spirit of initiative, political circumstances, and the difficulties of transport. The first steps to be taken would be to obtain legislative modifications permitting the union of capital; the construction of railways, canals, and roads to facilitate the use of the natural outlets; and the establishment of an equitable system of tariffs. In 1877 Spain had only 6199 kilometres of railway, and the coal traffic on the 5500 kilometres existing in 1872 was only 363,386 metric tons, of which 173,058 were for the use of the railways themselves.

It is well known that Spain is immensely rich in iron ores, whose good quality is equally famous, her mines containing very fine spathic iron, red hematite, magnetic iron, and oxide-hydrate. In 1871 Spain produced 385,762 tons of iron ore, 781,468 in 1872, 811,926 in 1873, 402,952 in 1874, 908,899 in 1876, and 1,162,170 in 1877. The greater portion of this ore is found in the Biscay provinces, and is mainly sent to England, Germany, and France for the manufacture of Bessemer steel. Herr KRUPP alone taking 200,000 tons. Very little iron is manufactured in Spain, the greater portion of manufactured iron being imported from Great Britain. In 1875, according to Señor PECHAR, her imports of manufactured iron were as follows, the greater part coming from England:—Pig-iron and cast-iron articles, 19,908 tons; rails, 11,380; plates, &c., 5904; articles in steel, &c., 5483 tons. There can be little doubt but that the immense mineral resources of Spain will one day be taken advantage of, if not by her own people then by foreigners, when the political settlement of the country will attract foreign capital.

#### THE GOLD FIELDS OF SOUTHERN INDIA.

During the past fifteen months a considerable amount of information concerning the auriferous reefs of the Wynnaid District of India has been published in the *Mining Journal*, and although it cannot be questioned that the commercial prospects of gold mining in the locality named have been much overrated, there appears to be abundance of evidence of the existence of gold deposits, which in Australia or the Western States of America would be turned to good account. The substance of Mr. Oliver Pegler's report was published in the *Journal* in December, 1878, and although there were some complaints at the time that owing to his limited inspection his report was less encouraging than had been expected, he saw enough to satisfy himself that the South Wynnaid was the Ophir of the Scriptures, and that the reefs were true veins and very rich. The only doubt which exists in the minds of practical men is as to whether there are any natural facilities for making gold mining remunerative, and some have gone so far as to say that in a district where it is difficult to obtain water to irrigate a coffee plantation the washing and treatment of quartz averaging between 8 dwts. and 9 dwts. per ton, could be successfully carried on; but on the other hand it is asserted that ditching has in the United States been attended with profit, and that many auriferous deposits otherwise worthless have been made successful by the aid of purchased water.

To determine what shall be done in the first place after 4,000,000£. profits have been earned, and secondly when an additional 5,000,000£. has been realised, affords some evidence that some of those concerned are sanguine enough for miners, but this very feeling will explain the liberal payment demanded by vendors. Hitherto there has been some doubt as to the justification for the heavy loading of the several companies, but the letter of Mr. R. P. Harding to the *Times* shows that it was absolutely necessary, in the enterprises with which he is concerned, in order to protect the interests of the bankrupt firm of Smith, Fleming, & Co., and of the Glasgow Bank shareholders. His statement is very explicit, and if his anticipations be realised he will entitle himself to congratulation for farsightedness of the strongest kind. He states that believing in the possibility of great results, and desirous that the alleged wealth, if it existed, should not be diverted from the creditors, he pressed his views of the importance of this asset on the liquidators of the City of Glasgow Bank, and with the aid of Mr. Jamieson, the Indian Gold Mines Company was formed to work the properties on terms which he states.

In addition to the purchase money the Indian Gold Mines Company agreed to provide a capital of 50,000£. for preliminary workings, and in the event of the adventure proving successful such further capital as may be required for the proper development and working of the mining rights, the profits to be apportioned:—1. In repayment of the preliminary capital. 2. Until the profits amount to 4,000,000£., 50 per cent. to the vendors and 50 per cent. to the shareholders. 3. After 4,000,000£. have been divided, 50 per cent. to the shareholders, 20 per cent. to the vendors, and 30 per cent. to the liquidators of the City of Glasgow Bank for the purpose of being apportioned among and paid to the contributors of the Bank or their representatives, in proportion to the value of the stock held by them respectively, until such 30 per cent. shall have amounted to 5,000,000£. The opinions of many practical miners who came to see the specimens from the reefs being that the quartz was similar in character to that of Ballarat and other rich districts in Australia, Mr. Harding deemed it prudent to assume they might be right, and especially provided that the vendors (trustees) should not have the power to sell or otherwise dispose of their interests in the company or in its profits until such profits have amounted to the 4,000,000£. before mentioned.

This was done in order that the creditors of the two firms may receive all the benefits of the contract until they are paid in full. Should this end be attained the shareholders of the City of Glasgow Bank will receive in all about seven millions sterling, and, wild as the idea may have been considered at the time, and indeed may still seem, Mr. Harding is assured that the richness of recent discoveries justifies faith in its realisation.

**GOLD MINES IN NOVA SCOTIA.**—From Halifax we learn that 230 ozs. of gold, the result of three weeks' work, have been brought there from Montague. Other mines in the neighbourhood are reported to be doing equally well.

**AMERICAN MINES AND ENGLISH CAPITALISTS.**—The Denver Tribune of Feb. 12 states:—Mr. Henry Altman, a New York capitalist, well known in our south-western mining districts, and who has examined them for himself closely, proceeds *via* New York to London, this morning for the purpose of organising an English company with several millions of dollars to purchase and work on partially developed mines south of Leadville. English capital has never in this way been lost in Colorado, but if our transatlantic cousins will persist in buying mines which have been good but worked out before they bought them

as heretofore in most instances, they have really more themselves than us to blame.

#### PREVENTION OF OVER-WINDING.

Mr. Ralph Moore has issued the following letter to the mineowners in his district as to the circular issued in December last, recommending measures for the prevention of over-winding:—

SIR.—I have received from various owners of collieries enquiries as to the kind of safety-hooks which I would recommend them to adopt. I am to inform you that the Secretary of State has no wish to prescribe what kind of safety-hooks or what kind of patent should be used with regard to these appliances. He is satisfied if owners, after an earnest consideration of the matter, adopt those measures which on the whole appear to them the best calculated to secure the desired object.

RALPH MOORE,  
Rutherglen, Glasgow, February. Inspector of Mines of the District.

**THE BLANTYRE EXPLOSION.**—The report of Messrs. Wm. Alexander and Ralph Moore, the Inspectors of Mines, appointed to enquire into the circumstances of the Blantyre explosion, has just been issued. The following are the conclusions at which they have arrived:—1. That the arrangements for the ventilation of the pit were sufficient, and that the quantity of air sent in was ample under ordinary conditions.—2. That the explosion was an explosion of fire-damp.—3. That owing to some abnormal condition there had been at the time of the explosion an accumulation of fire-damp of comparatively small extent.—4. That while locked safety-lamps were handed out to the men, some of them had keys, tobacco-pipes, and matches, and some of them had been smoking at the moment of the explosion.—5. That the gas was not ignited at a shot.—6. That up to the time of the explosion five shots had been fired, and in particular one or two of them near the place where probably the gas existed, and that some of these shots may have had the effect of displacing the gas, and bringing it in contact with an open light, which there is too much reason to suppose existed.

**IMPORTANT MINING CASE.**—Two summonses of great interest to the mining community, and the first of the kind tried, were heard at Bedford, Leigh, Lancashire, on Monday. Messrs. Ackers, Whitley, and Co. were charged by the Inspector of Weights and Measures with using unjust scales, according to which colliers' wages are paid. The machine at the pit mouth, in the first case, was found 67 lbs. deficient, and as 1000 tubs of coal were raised per day, the colliers, it was stated, thereby lost payment for the getting of nearly 30 tons. The highest penalty of 5£. and costs was imposed in each case.

**RUSSIAN AND ENGLISH COAL.**—Attention has on more than one occasion been called to the probability of Russia opening out her vast reservoirs of coal, and so becoming independent of England for supplies of fuel for her navy and manufactures. A step for that purpose has just been taken by the Russian Government, which has issued instructions for the assembling of a Coal Commission at St. Petersburg next month. The inquiry will extend—1. To a comparison of foreign and Russian coal.—2. An investigation into the causes of the slow development of the coal industry of Russia.—3. The necessary measures to be adopted to render coal for fuel obligatory on all or certain of the Russian railway system instead of wood.—4. As to whether the use of Newcastle and Cardiff coal can not be discontinued, and vessels of war supplied from the coal fields of the Donetz Government; and as regards the best means of developing the coal supply of Siberia and Central Asia. The coal field of Donetz is the most extensive one, and something like that of South Wales, for the beds from being highly bituminous in the western part of it pass by imperceptible gradations into anthracite in the eastern portion. According to the details and sections contained in the elaborate works of Sir R. Murchison and his coadjutors, the coal fields of the Russian Empire are of enormous area, and in some parts highly productive, and if vigorously opened out would become of great economic value. The coal field between the Dnieper and the Don, north of the Sea of Azof, are amongst the most valuable in Russia, having a total area of 11,000 square miles. In Siberia the extent of the coal measures has not been determined, but there is very little doubt that they cover a large area of country. In Russian Poland there are some of the thickest seams in Europe, one of them, found between two others, being 16 yards in thickness. The report of the Commission, it is said, is looked forward to with more than ordinary interest in certain circles in Russia, whilst we are told that some wealthy associations of Paris capitalists have acquired royalties in the district of the Donetz, and will soon commence operations, and try to affect the supplies of British coal. But everything will depend upon the price at which it can be raised. Labour is very cheap and labourers numerous in Russia, so that considering the cost of transport from England it is to be feared that our exports will be seriously affected. At the present time Russia takes more than one-tenth of all the British coal exported, so that English colliery owners are deeply interested in the problem which the Commission will endeavour to solve.

**THE SKERNE IRON COMPANY—STARTING OF THE WORKS.**—The works of this company, which have been laid off since the failure last May, have this week been re-started, some puddling furnaces being put on. The plate mills will almost immediately be set in operation, and by the beginning of next week it is expected that 400 or 500 men will be at work. The company has, we understand, been reconstructed, with Mr. Putnam, of Darlington, as managing director, and Mr. Kent as secretary. There is every reason to hope that under the new management the Skerne Company will enter on a prosperous career. This is the last of the Darlington manufactured ironworks which remained to be brought into operation.

**THE IRON TRADE.**—During the prolonged depression of last year 16 limited liability companies connected with the iron and steel trades of the Sheffield district were so seriously affected that their capital of 6,766,530£. had depreciated by 2,182,789£. in August last. On Dec. 1, owing to the revival of trade, the property improved by 2,278,662£., and on February 1 there was a further improvement of 1,215,175£., making an increase as compared with August of 3,493,837£. There was some reaction in February, but the returns issued on Wednesday show an improvement, as compared with those of August, 3,358,664£.

**THE PEAT LANDS OF EXMOOR.**—A North Devon correspondent writes that is proposed to make some experiment in the extensive peat lands of Exmoor, with the view to utilising them for the purpose of peat charcoal. It is considered that Exmoor offers an area for working of such an extent that a large number of hands could be employed for the next hundred years without working out the peat deposits.

**AUSTRALIAN AND TASMANIAN TIN.**—The interesting articles on this subject contributed by Dr. Eduard Reyer to the *Oesterreichischen Zeitschrift für Berg und Hüttenwesen*, has just been reprinted in pamphlet form (Wien: Der Verfasser), and will be found extremely useful for reference, as the sources of the various statements are carefully given. Dr. Reyer is neither pessimist nor optimist, and believes that as to the future the real output will be found between the depressing statements of Mufford and other Cornishmen and the glowing anticipations of some other correspondents of the *Journal*.

**OBTAINING PRODUCTS FROM COAL AND PEAT.**—A process of separating by lixiviation or percolation paraffine, paraffine wax, oil, or other oleaginous or similar substances from cannel coal, peat, shale, and earths containing hydro-carbon matter, the procedure being varied according to the nature of the hydro-carbonaceous earth or substance in which the hydro-carbon is contained has been invented by Mr. W. BELL, of New York. He takes of coal, peat, shale or earth finely powdered and heated to a temperature of 85° to 100° Fahr., 100 lbs.; he adds thereto in a double vat (whose upper or inner receptacle has a false bottom) 16 gallons of gasoline or naphtha at a temperature of about 85° Fahr., or of sulphuric ether (12 gallons, and allows the same to remain in solution about 4 hours. He then draws the same from the bottom of the said vat and returns it by a tube to

the earth or other substance from time to time at intervals of about one hour, so as to allow the solution to slowly percolate through until by test there remains no paraffine in the said earth or other substance, then the solution is passed through into a second and third vat, and then allowed to run through a worm condenser after adding to the solution the proper precipitants of paraffine or other product obtained by the above described process.

#### GEOLOGICAL SOCIETY OF LONDON.

Feb. 25.—ROBERT ETHERIDGE, F.R.S. (President), in the chair.

Joseph H. Cowham, Westminster Training College; William Alexander Forbes, B.A., Ashley-place; M. H. Gray, Kuching, Sarawak, Borneo; and Charles Thomas Whitmell, M.A., B.Sc. (Lond.), F.C.S., Havelock-street, Sheffield, were elected Fellows of the Society.

H. T. Burks, Paramaribo, Dutch Guiana; John Allen McDonald, M.Inst.C.E., Holly-place, Hampstead; and Rev. Thomas Edward Woodhouse, B.A., Amburst-road, Hackney, were proposed as Fellows of the Society.—John Ward, Lenoxvile, Belfast, will be balloted for as a Fellow; and Prof. F. von Hochstetter, of Vienna, and Prof. A. Renard, of Brussels, as Foreign Correspondents of the Society.

The following communications were read:—

- 1.—“On the Geology of Anglesey,” by Prof. T. McKenny Hughes, M.A.
- 2.—“Notes on the Strata exposed in laying out the Oxford Sewage Farm at Sandford-on-Thames,” by E. S. Cobbold, F.G.S., Assoc. M.I.C.E.
- 3.—“A Review and Description of the various Species of British Upper Silurian Fenestellidae,” by G. W. Shrubsole, F.G.S.

At the meeting on Wednesday the following communications will be read:—1. “The Rocks of the South of Ireland and North Devon,” by Prof. E. Hull, F.R.S., F.G.S.—2. “A Review of the Family Diastoporidae for the purpose of classification,” by G. R. Vine: communicated by Prof. P. M. Duncan, F.R.S., F.G.S.—3. “On a New Thecidont Reptile (*Cleiorhizodon orenburgensis*, *Twelvetr.*), from the Upper Permian Cupiferous Sandstones of Kargalinsk, near Orenburg, in South-eastern Russia,” by W. H. Twelvetrees, F.G.S.

**WINDING AND OVERWINDING.**—An interesting paper was recently read before the Wigan Mining and Mechanical School on Winding and Overwinding, by Mr. C. M. Percy, M.I.M.E., the lecturer on Mechanical Engineering in that establishment, and it has now been reprinted with additions (Wigan: Wall, Wallgate). Mr. Percy carefully discusses the best form of winding-engine, the advantages and disadvantages of the different kinds of ropes, drums, &c., and then describes the chief detaching hooks now in use, and explains their various details and differences. The pamphlet is well worth studying.

**SOUTH STAFFORDSHIRE INSTITUTE OF MINING ENGINEERS.**—The monthly meeting of this Institute was held on Monday, in the Mining Museum, Dudley—Mr. W. J. Hayward presiding. There was a large attendance. After some routine business, Mr. Hayward called attention to the necessity of providing means for the prevention of overwinding and damage in the case of rope-breaking. They were always anxious to save life, but with so many hooks it was impossible to tell which was the best. Mr. Bladen then described Ormerod's hook, Mr. Hall exhibited and explained Walker's hook, Mr. Sugden displayed and gave a description of his own detaching hook, Mr. Leonhardt and Mr. T. Johnson exhibited the former's patent safety apparatus and the detaching hook, and Mr. Humble showed King's patent and two of his own, one for the prevention of overwinding, and the other for catching the cage on the guides if the rope broke. A committee, consisting of the Council of the Institute, and Messrs. Davis, Parfield, Vernon, Thornton, and the secretary (Mr. Alexander Smith, M.I.C.E.) was appointed to report on the best hook to the members.

**GEOLGISTS' ASSOCIATION.**—The memorial dinner, to celebrate the twenty-first anniversary of the foundation of this prosperous and useful institution, was held at the St. James's, on Thursday evening (Prof. T. Rupert Jones, F.R.S., the President for the year, occupying the chair). About 150 sat down, and the usual loyal toasts having been drunk, the Chairman, in appropriate terms, proposed the toast of the evening—“The Geologists' Association—coupling with it the names of Hyde Clarke (who may fairly be regarded as the real founder, and the man to whose efforts the successful establishment of the Association was due) and of the Rev. Thomas Wiltshire, as the two leading founders present. Dr. Hyde Clarke, in responding, gave a brief outline of the circumstances which led the founders to undertake the task, and spoke in highly complimentary terms of the energy and ability of their first President (the late Mr. Toulmin Smith), and remarked that among their earliest members, and those which gave the Association strength, and enabled it to succeed, were numerous members of the Palaeontographical Society. The young Geologists' Association progressed rapidly, the number of members speedily reaching 300. At the present time it includes most of the leading scientists of the day, who devote themselves to geology and the allied sciences. The Rev. Prof. Wiltshire also responded. The next toast—the Past Presidents—was given in an able little address, and as ably responded to by Prof. John Morris, M.A., and Mr. Carruthers, F.R.S.; whose names were coupled with it. Prof. Morris said he was highly gratified to be present at the celebration of the maturity of the Geologists' Association, although he had not the honour of being numbered among the 36 who practically originated it. He had been connected with it, however, from the close of its first decade, and the further development which resulted from the infusion of new blood which then took place must, he was sure, be highly gratifying to both Dr. Hyde Clarke and Mr. Wiltshire. He was also very pleased that with that progress they had not in any way interfered with the Geological Society, but on the contrary their mutual advantages were so fully appreciated that at the present time they had the president, the two secretaries, several other officers, and about 100 members of the Geological Society on their own list of members. Mr. Carruthers also responded. The toast of the Demonstrators of Museums, Directors of Excursions, Local Entertainers of Excursion Parties, and Local Geologists, was appropriately given by Mr. Alfred Tylor, F.G.S., &c., and responded to in instructive, though humourous, terms by Prof. Owen, F.R.S.; Mr. John Jones, of Guildhall, celebrity; and Mr. J. L. Lobley, a past secretary of the association. The Universities and the University College of London, proposed by Mr. Etheridge, F.R.S., was responded to by the Rev. Prof. Bonney, F.R.S., who in a few brief remarks pointed out the relative fields occupied by the older universities, and by those on the model of the University of London. Mr. Hudleston proposed the Geological Society of London, to which Mr. Etheridge as Pres. G. S. responded; and Dr. Henry Woodward, F.R.S., having proposed the Visitors, which was duly responded to, several other toasts were drunk, and the meeting separated after spending a very enjoyable evening.

**TECHNICAL EDUCATION AND THE CITY GUILDS.**—The worshipful Company of Turners have issued their usual annual announcement of prizes offered for competition. They propose this year to give their Silver Medal, the Freedom of the Company, and (subject to the consent of the Court of Aldermen) will also obtain the Freedom of the City of London for any workman, whether master, journeyman, or apprentice in the trade in England, who may send in the best specimen of hand turning in wood, ivory, and precious stones, including engraving, in intaglio. The competition in wood includes turning in both hard and soft wood; and that in ivory includes vegetable ivory. The qualities which will be considered in awarding the prizes are stated in the circular, which can be obtained by every intending competitor. The candidate may make his own selection from the stated conditions, but the one who best fulfills the largest number, including the most important qualities, will be preferred; but it should be observed that prizes may be gained by excellence of turning shown in the simplest objects for every day use. The work must be all hand turning, produced in the lathe without special rest or tool apparatus, and the carving must be the work of the exhibitor. Specimens must not exceed 24 in. in height, and 1 ft. in diameter. A Bronze Medal will be given as a second prize, and certificates of merit, as well as money prizes, will be awarded in both the wood and ivory competitions at the discretion of the judges. There will also be extra prizes given for work in wood exhibited exclusively by apprentices, such work to

be simple plain commercial turning—that is objects in general use, without ornamentation or inlaying. In the competition for works in precious stones, and for engraving in intaglio, specimens will be divided into classes as follows, according to the material and the character of the work.—Class A: Ruby, sapphire, emerald, and spinel.—Class B: Topaz, aquamarine, crysolite, jargoon, amethyst, rock crystal, garnet, peridot.—Class C: Seal stones, cabochon work of all kinds in regular or fancy shapes, including coral cut for mounting, carved garnets, turquoise, onyx, &c.—Class D: Diamonds—brilliants and roses. In each class a medal will be given if the specimens entered are considered worthy; but the chief medal and freedom will be adjudged to the candidate who shows the highest excellence of workmanship, combined with the most general ability in the other branches of his trade.

## SOUND INVESTMENTS.

**LONDON, CHATHAM, AND DOVER RAILWAY.**—Owing to the very satisfactory report and accounts recently issued, followed by the full explanations of the Chairman at the meeting, considerable purchases of both preference and ordinary stocks have been made. Instead of discerning the real causes at work, rumour has attributed the buying to a more special influence—the withdrawal by the South-Eastern Railway of their new schemes before Parliament which were supposed to be antagonistic to the interests of this company. Investors are quite satisfied with the intrinsic merits of the property, and do not fear any action of the South-Eastern, who have far more to lose in a contest than the Chatham and Dover.

The connections with the Midland, Great Northern, Great Western, Brighton, London and North-Western, South Western, Metropolitan, and the South-Eastern itself at Blackfriars, place the Chatham Company in an exceptionally strong and unassailable position, and shareholders cannot be too often reminded of the fact that these connections were secured in the very darkest hour of the company's history, when the capital was raised for their construction by the issue of ordinary stock at the price of 20. In estimating their present value at five times the original cost I was by no means extravagant, seeing that the Chairman stated, "It is quite true that all around London there is a most valuable series of lines. Our access to the North is very valuable. It could not be purchased now at any price. It never could be done again. It is not now a question of money, but a question of possibility. If we had not made the access from Ludgate to Farringdon-street when we did, we never could have made it."

In every respect the current year is likely to compare favourably with its predecessor, and there will no doubt be considerable augmentation of Continental traffic in connection with the Brussels Exhibition, ensuring better prices for both preference and ordinary stocks.

**GRAND TRUNK RAILWAY OF CANADA.**—The steady improvement in the financial position of this company is remarkable. The price of the 5 per cent. debenture stock has reached 100, and as the 6 per cent. equipment bonds, representing the only prior charges, are being paid off as they fall due, its value is certain to rise to the level of Canadian Government 5 per cent. stocks—108.

There is every prospect that before very long the directors will be in a position to issue the ordinary stock in reserve at a price considerably higher than at present. I have no doubt that in the course of the ensuing summer it will be possible to issue it at the price of 25, thus producing a sum of £25,000. This amount might be advantageously applied in doubling the line between Montreal and Toronto, to the enormous benefit of the entire system.

It is surprising to note the number and variety of theories which prevail to account for the delay in the growth of the traffic returns which were expected upon the opening of the line to Chicago. Some have been so unreasonably extravagant as to expect that from the very day when this new line was opened its full capacity should be immediately demonstrated. It is not yet in full work, but when it is I am confident the most sanguine expectations will be realised. As an instance of the early experience of a new railway I have a vivid recollection of being myself one of three who, upon the opening of the Metropolitan District Railway, were the only passengers from Kensington. Metropolitan District stock was then about the same price as Grand Trunk ordinary stock is now.

There is now an accumulation of corn in Chicago owned by a combination of speculators, the magnitude of which even in the United States, the home of everything colossal, is without parallel. The traffic returns of the Grand Trunk meanwhile show continued improvement, but when this so-called "grain blockade" collapses, the volume of receipts must be enormously augmented.

**MEXICAN RAILWAY.**—The traffics recently published have caused some little disappointment, as they did not show the heavy increase to which shareholders have lately become accustomed. It is well to point out that the last returns compared against the largest amount the company has ever received in one month. I continue to entertain as favourable opinions as to the future of this railway as when I last recommended investments in its securities.

The new 6 per cent. debentures will be issued in a few days. These bonds can now be purchased at about 105, at which price they pay 5*l.* 15*s.* per cent. I have very little doubt that before long they will advance to 110, or even higher, as they are unquestionably a first-class security.

**ATLANTIC, MISSISSIPPI, AND OHIO RAILWAY.**—In my estimate last month of the value of the first mortgage bonds of this railway, I based my opinions upon the last receiver's report and accounts, and the published traffic returns, and a subsequent careful study of both convinces me that the line is now earning sufficient to meet the full interest thereon. The great fall in price which has since taken place is, therefore, in my opinion, totally unjustifiable.

The statements and so-called estimates just published by the bondholders' committee, are regarded so unfavourably as to have called forth a protest from the largest holders, who will, no doubt, take care to give full expression to their views at the meeting to be held next month. I shall certainly attend on that occasion, when I hope to be able to elicit such information as will show the position of the railway in its true light, and be at once convincing of its greatly improved position and prospects.

**GOLD MINING IN INDIA.**—Since directing attention to this subject it has attracted a considerable amount of interest, although in the first instance, as perhaps was natural, my anticipations were regarded as savouring more of romance than reality. There is now, however, abundant testimony as to the extraordinary richness of the gold deposits, which are only awaiting the introduction of capital to develop. It would be impossible for any report to be of a more favourable character than that of Mr. Brough Smyth, the Secretary for Mines for the Colony of Victoria, who, in consequence of his vast Australian experience, was specially engaged by the Madras Government to examine and report upon these properties. The result of his examinations appeared in the Times of Feb. 16, in a telegram from their correspondent in Calcutta. Mr. Brough Smyth states that "the reefs are very numerous, of more than average thickness, of great longitudinal extent, and highly auriferous." As the Madras Government have decided that in future they will limit the gold mining leases to a maximum of 30 acres, and for a period of 20 years, it is impossible to estimate what value the property owned by the South Indian and the Indian Glenrock Gold Mining Company may develop into, seeing that they possess in perpetuity nearly 5000 acres situated in the very richest district. Mr. Brough Smyth's report specifically refers to the properties of both these companies.

The subject of these gold discoveries has been referred to in the House of Commons, and the Government has acknowledged the accuracy of the reports. When the official documents are made public I think shareholders will be proud of their position as pioneers of this great enterprise, which cannot fail to benefit our Indian Empire, and galvanise our home markets into fresh life.

**SOUTH INDIAN GOLD MINING COMPANY.**—A large business has taken place in the shares of this company during the past month at prices ranging from 2*l.* to 3*l.* 10*s.* per share. It was but natural that some who bought at 1*l.* should be tempted to realise a profit,

The List of Applications for Shares at Par will close on MONDAY for London, and TUESDAY for the Country.

## The Brazilian Gold Mines, Limited.

(INCORPORATED UNDER THE JOINT-STOCK COMPANIES ACTS 1862 TO 1879, BY WHICH THE LIABILITY OF EACH SHAREHOLDER IS LIMITED TO THE AMOUNT OF HIS SHARES.)

### FIRST ISSUE OF £40,000, IN 40,000 SHARES OF £1 EACH.

A valuable privilege is given by the Articles of Association to Allottees of this issue—to call for an allotment of an equal number of shares at par prior to the end of December, 1881. Power being reserved to the directors to fix an earlier period for making such last-named allotment.

### Capital £80,000, in 80,000 shares of £1 each.

(WITH POWER TO INCREASE.)

Deposit: 10*s.* per share on application; 10*s.* per share on allotment.

#### DIRECTORS.

GEORGE MILLS HARVEY, Esq. (Chairman), The Pines, Streatham Hill, S.W.

ROBERT WILSON, Esq., 12, Brunswick Gardens, Kensington, W. (Director of the Richmond Consolidated Mining Company, Limited.)

JOHN EDWARD NAYLOR, Esq. (formerly Chairman of the Santa Barbara Gold Mining Company, Limited), Royal Albert Yacht Club, Southsea and Liverpool.

CHARLES FREDERICK CARNE, Esq. (Director of the Santa Barbara Gold Mining Company, Limited), 53, The Albany, Liverpool.

THOMAS JOSEPH CANTRELL, Esq., M.D., Chesterfield, Dulwich Wood Park, Upper Norwood.

(With power to add to their number.)

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BROKER—WILLIAM LOCOCK WEBB, Esq., 8, Finch-lane, and Stock Exchange, London, E.C.

SECRETARY—G. C. HARVEY, Esq.

Offices: SOUTHSEA CHAMBERS, BISHOPSGATE STREET WITHIN, E.C.

#### PROSPECTUS.

This company is formed for the purpose of purchasing and working gold mines in Brazil. A provisional contract for purchase has already been entered into, and which is referred to at the foot of this prospectus. This contract comprises a property known as the San Antonio Estate, containing an extensive group of mines, in the province of Minas Geraes, the richest gold producing region in Brazil.

The estate is estimated as being about three miles long and two miles broad, and is reported to contain eleven gold rock mines, which it is stated have yielded gold to the value of more than £150,000, although none of the lodes have been worked more than 18 fathoms below surface.

On the northern side of the estate is a mountain of auriferous jacutinga. This formation has not been explored to any extent, a few fathoms only having been driven to intersect the jacutinga, which gave fair samples of gold. It is by no means improbable that gold may be struck in the jacutinga within a few months of the commencement of operations, in which case increasingly profitable results may accrue from the outset. In a similar company, when gold was cut in the jacutinga in this district some years since, dividends were paid to the shareholders of 100 per cent. per annum upon the capital.

The estate has an ample supply of water; wood is abundant and suitable for ordinary and mining purposes; and good and sufficient pasture for cattle, horses, and mules.

Special attention is drawn to the reports upon which this prospectus is based, made by experienced and reputable authorities upon the gold mines of Brazil, showing:—

- 1.—That the section of gold producing property comprised in the purchase contract is very ample, and of great attested value.
- 2.—That it is situated in the centre of the richest gold producing region in Brazil, 40 miles from the Don Pedro; 30 miles from the Santa Barbara, and 20 miles from the St. John del Rey.
- 3.—That the entire property is highly auriferous, gold to the

value of £150,000 is reported as having been extracted from very limited shallow workings.

4.—That the mines can be worked at a comparatively small expenditure—pumping machinery, with its heavy outlay, being unnecessary, a feature that cannot possibly be unduly estimated.

5.—That physically and mineralogically the property possesses advantages likely to ensure a great and permanent success.

The company will have the exceptional advantage of the personal supervision of Mr. Thomas Tregellas, the resident manager of the Santa Barbara Mines. To this gentleman's report the directors invite special attention.

It is well known that among the Brazilian gold mines the St. John del Rey (in the rock formation) has paid its shareholders in dividends more than £1,000,000 upon a capital of £253,000, the market value of its stock being £700,000; that the Santa Barbara (in the rock formation) last year paid dividends of 30 per cent., and its 10s. shares command a market value of more than 400 per cent. premium; and that the Don Pedro (in the jacutinga formation), when some years ago the auriferous beds were reached, paid 100 per cent. per annum in dividends, and the shares (15*s.* paid) sold in the market at from 600 to 700 per cent. premium.

The contract provides for the sale to the company of the San Antonio Estate, with its valuable mines, for £20,000, payable as follows:—£14,000 (out of the first issue of £40,000) in paid-up shares and £6000 in cash and bills.

The following are the particulars of the only contract entered into by the company:—

Dated the 19th day of February, 1880, made between William Greig, of the one part, and George Crawford Harvey, for and on behalf of the company, of the other part.

This contract may be seen at the solicitor's offices.

Full Prospectuses, with Reports, and Forms of Application, can be had at the Offices of the Company.

but I have little doubt as this property is opened out fresh buyers will come in, even at higher prices, for not only will the company enjoy the profit on its own workings, but, in conjunction with the Indian Glenrock Company, out of their united 5000 acres, it will be in a position to let off on leases small allotments in the same way as the Government propose to do, and from royalties derived from this source alone a very handsome dividend should be secured on the small capital of 100,000*l.*

**INDIAN GLENROCK GOLD MINING COMPANY.**—The shares of this company, which is in close alliance with the South Indian Gold Mining Company, were all quickly absorbed, the subscriptions for the capital of 100,000*l.* amounting to 700,000*l.* for nearly 4000 applicants. It is asserted that some large purchases have been made on behalf of capitalists in Bombay, Calcutta, and Madras. When it is remembered that the merchants in those cities are possessed of enormous wealth, and that they are at all times quite ready to employ it in a speculative venture, it need not be a matter of surprise if these shares and those of the South Indian Gold Company should advance to a very high price.

**CANADIAN COPPER AND SULPHUR COMPANY.**—These are times of revival, and in some instances they are very remarkable. A year ago the 4*l.* shares of the Panulillo Copper Company were selling at 16*s.*; the price is now 5*l.*, after touching 6*l.* 5*s.*, and even at this price they are considered by experts a good investment. This change has not been brought about by any new discoveries, but by more economical working, combined with a moderate rise in price of the product.

The Canadian Copper Company, which owns probably the most extensive copper mining properties under one control in the world, after experimentalising for years with various methods of copper extraction and meeting with many disappointments, has at length settled on a simple method of smelting, which is likely to prove so profitable as to give a good return on the whole capital from the product of only one of its mines.

Satisfactory as this is of itself, it must be additionally gratifying to the shareholders as being coincident with the very important official announcement just made to the effect that a great discovery of copper has been made in the celebrated Acton Mine, rivaling, so the agent reports, "the show of the mine in its palmiest days."

Although this is spoken of as a discovery, it is no more than the realisation of the prediction of those best informed who believed that this mine would again yield copper as richly as in former times. The probabilities are, therefore, that the 4*l.* fully paid shares of this company, which can now be purchased at a discount of 25 per cent., will advance to a considerable premium in the next few months.

Most of the properties of this company are on the line of the Grand Trunk Railway between Montreal and Richmond Junction, and it is highly satisfactory to find that this rich mineral district is again becoming a seat of prosperous mining enterprise. It is to be hoped that the company will lose no time in the further development of its many mining properties, and so fulfil the expectations of its original proprietors, whose faith induced them to buy the shares at a large premium on the issue price.

These shares have hitherto been dealt in in Glasgow, but the market has extended to London, Liverpool, and Manchester.

An investment of 100*l.* (or a proportionate amount) in each of the three following—South Indian Gold, Indian Glenrock Gold, and Canadian Copper shares—will I feel confident prove a profitable investment before the end of June.

**NEUCHATEL ASPHALTE.**—The sudden advance in the ordinary shares to 1*l.*, and the preferences to 2*l.*, recorded in my cir-

cular last month, naturally induced many to sell who had purchased at a few shillings shortly before. The prices have consequently fallen, and as the report of the directors to be soon issued is likely to be very favourable the shares are again well worth buying at 13*s.* and 35*s.* respectively.

**TRAMWAYS.**—Investors may now safely direct their attention to these securities at the present reduced quotations which have only been brought to their present level from exceptional causes, which are not likely to recur. Henceforward the weekly traffic returns will compare against an unusually adverse period, and it is reasonable to assume that the deficiencies of 1879 will be fully recouped in the present year. It must be remembered that it will require some little time before tramway companies participate in the general improvement in trade, as those who are the principal patrons of tramways have, after so prolonged a period of depression, many prior claims to consider before they can afford to indulge in the luxury of tramway locomotion, cheap though it be.

**LIVERPOOL AND DUBLIN.**—The meetings of these two companies held during the past month were specially interesting, as demonstrating the power which shareholders possess, and may exert for their own benefit if only they will interest themselves in the government of their properties. The discussion in both instances must afford conclusive evidence to the proprietors as to the soundness and progressive character of each undertaking.

**BORDEAUX TRAMWAYS AND OMNIBUS.**—It is expected that the first sections of these tramways will be opened in time for the Easter traffic. Meanwhile the omnibus service is producing nearly 1000*l.* per week, the total gross receipts since the formation of the company in November last amounting to 14,916*l.*, so that the shares at the present time include four months' earnings from this source. It may be well to remind intending investors that the company possesses the absolute monopoly of the whole of the tramway and omnibus traffic of the city and suburbs of Bordeaux. I do not know of any other city where such a valuable concession has been granted. I hope to issue a special circular with reference to this company at an early date.

—From Mr. Wm. ABBOTT's Circular for March, Tokenhouse Yard, London, E.C.

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**GEOLGY.**—In the Preface to the Student's Elements of Geology, by Sir CHARLES LYELL, price 9*s.*, he says—"As it is impossible to enable the reader to recognise rocks and minerals at sight by aid of verbal descriptions or figures, he will do well to obtain well-arranged collections of specimens, such as may be procured from Mr. TENNANT (149, Strand), Teacher of Mineralogy at King's College, London." These collections are supplied on the following terms, in plain mahogany cabinets:—

100 specimens, in cabinet, with 3 trays.....	£ 2 2 0
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The property is in close proximity to the Hodbarrow Mines, and is of large extent and undeveloped, though a considerable quantity of ore has been gotten where working has been made.

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Letter marked "Lead Mine," to Messrs. Jackson and Prince, Solicitors, 64, Cannon-street, E.C.

WILLIAM CRAWFORD FORTESCUE, Deceased.

PURSUANT to an Act of Parliament 22nd and 23rd Victoria, chapter 35, intituted "An Act to Further Amend the Law of Property and to Relieve Trustees," notice is hereby given, that ALL CREDITORS and other persons having any CLAIMS or DEMANDS upon or against the Estate of WILLIAM CRAWFORD FORTESCUE, late of 15, Lockyer-street, in Plymouth, in the county of Devon, Solicitor (who died on the 11th day of January, 1880, and whose Will was proved in the High Court of Justice, Probate Division, District Registry at Exeter, on the 9th day of February, 1880, by Everilda Armentil Fortescue, the widow of the deceased, and Edward Gaskins Bennett, of Plymouth aforesaid Solicitor, the Executors in the said Will named), are hereby required to SEND IN THE PARTICULARS in writing of their CLAIMS to us, the undersigned Solicitors to the Executors, on or before the 30th day of April, 1880.

And notice is hereby also given, that after the said 30th day of April, 1880, the Executors will PROCEED to DISTRIBUTE THE ASSETS of the said William Crawford Fortescue, deceased, among the persons entitled thereto, having regard only to the claims and demands of which the said Executors shall then have had notice, and they will not be liable or answerable for the assets so distributed, or any part thereof, to any person of whose debt, claim, or demand they shall not then have had notice.

WHITEFORD AND BENNETT, Courtenay-street, Plymouth, Solicitors to the said Executors.

Dated this 23rd day of February, 1880.

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W. H. R. resides in the immediate vicinity of the richest Mines in Cornwall, and from his intimate and practical knowledge of Mining is at all times in a position to give sound and reliable advice.

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NANT RHYS SYNDICATE (LIMITED).—A company established to work the VALUABLE LEAD PROPERTY adjoining the celebrated Cwmystwyth Mine. Work is now progressing upon one of the champion lodes.

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M. S. TONKIN BROTHERS, MINING AGENTS, SURVEYORS, AND ASSAYERS, STANHOPE, DURHAM.

MINES INSPECTED AND REPOURED ON.

## LEAD ORES.

Date.	Mines.	Tons.	Price per ton.	Purchasers.
Feb. 23—	Grogwinion	100	£12 15 0	Par Smelting Works.
	Foxdale	100	12 10 0	Walker, Parker, and Co.
	Central Foxdale	50	14 2 0	Nevill, Druse, and Co.
Mar. 1—	Pandora	20	11 11 0	ditto
4—	Van	20	13 0 0	Walker, Parker, and Co.
	ditto	40	13 3 0	Nevill, Druse, and Co.
	ditto	20	13 0 0	Panther Lead Company.
	ditto	80	13 0 0	Adam Eytom.
	ditto	40	13 11 6	Adam Eytom.
	Gorsedd	last week	14 tons of Lead, realising 132. 15s. per ton.	

## BLENDEN.

Date.	Mines.	Tons.	Price per ton.	Purchasers.
Mar. 1—	Pandora	30	£3 16 0	Vivian and Sons.
2—	Sentein	100	4 7 0	Richardson and Co.
	Van	37½	3 15 0	Villiers Speiter Co.
	ditto	37½	3 15 0	Kenrick and Son.

## MOLD, FLINTSHIRE.

IMPORTANT SALE by PUBLIC AUCTION of COLLIERY and BRICKWORKS LEASES, MACHINERY, and PLANT as a going concern; FREEHOLD LAND and COTTAGES, HORSES, PORTABLE ENGINE, &c.

M. S. S. CHURTON, ELPHICK, and CO. have been instructed by the liquidators of the MOLD-ARGOED COLLIERY COMPANY (LIMITED) to OFFER THE ABOVE at the Grosvenor Hotel, Chester, on Tuesday, the 9th March, 1880, at Two o'clock precisely.

Catalogues and full particulars may be obtained of the Auctioneers, Chester; of Messrs. Kelly and Keene, solicitors, Mold; or of Mr. H. R. Duke, 7, Queen Victoria-street, London, E.C.

TO BE SOLD BY PUBLIC AUCTION, under Decree of the Supreme Court of Newfoundland in Equity, in a suit between CHARLES FOX BENNETT, Plaintiff, and SMITH, MCKAY, and LEANDER GILL, Defendants, on Thursday, the 1st day of July next, at Twelve o'clock noon (if not previously disposed of by private sale), at the Court House, St. John's, Newfoundland, that VALUABLE COPPER MINE and MINING PROPERTY called and known as the UNION MINE.

Situate on the east and west sides of Tilt Cove, on the north side of Notre Dame or Green Bay, Newfoundland, and near Cape John, with all erections, improvements, plant, and other property and effects thereto appertaining.

The Mine is held under Grant in fee from the Government of Newfoundland, containing two miles in length by half a mile in breadth; a License of Occupation from the said Government containing one mile square west of and adjoining the Crown Grant, and land held under conveyance of fee simple interest of former owners.

The title-deeds and documents, plans and surveys and Conditions of Sale of the property may be seen, and further information may be obtained, by application to PRESCOTT EMERSON, Esq., Q.C., Master in Chancery, at his office, in St. John's, or to either of the undersigned solicitors for the parties, or to either of the parties.

PRESCOTT EMERSON, Q.C.,

Master in Chancery, St. John's, Newfoundland.

January 23rd, 1880.

For further particulars apply to C. T. BENNETT, Esq., 55, Queen's-square, Bristol; Messrs. HENRY BATH and SON, Gresham House, London; or, to PINSENT and GREENE, Solicitors for the Plaintiff; WINTER and CARTER, Solicitors for Defendant; MCKAY.

IN VOLUNTARY LIQUIDATION UNDER THE COMPANIES ACT, 1862.

THE NEW LLANGYNOG LEAD MINING COMPANY (LIMITED).

TO BE SOLD, BY PRIVATE TREATY, ALL the BENEFICIAL INTEREST of the New Llangynog Lead Mining Company (LIMITED) the LLANGYNOG LEAD MINES, comprising all the valuable, productive, and extensive mines, veins, beds of lead, ores of lead, and other metals and minerals known collectively as the Llangynog Lead Mines, and in the reservoir, water-supply rights, easements, and interests thereto belonging, situate in the several parishes of Llangynog, Llanrhafael-y-Mochnant, Hirnant, and Pennant, in the county of Montgomery; and also the WHOLE of the movable PLANT and MACHINERY of the said company.

The Llangynog Lead Mines have been a highly productive and dividend-paying property.

The mines, machinery, and plant are in working order, and considerable quantities of ore are now being raised.

The works may be inspected at any time upon application to the Manager at the Mines. The leases and agreements may be inspected at the offices of Messrs. LONGUEVILLE, JONES, and WILLIAMS.

All further information may be obtained, and maps of the property inspected, on application to Messrs. GRO. HASWELL and SONS, 84, Foregate-street, Chester; to HENRY DENNIS, Esq., Mining Engineer, Hafod-y-Bwch, Ruabon; or to Messrs. LONGUEVILLE, JONES, and WILLIAMS, Solicitors, Oswestry.

VALUABLE FREEHOLD COLLIERY WITH COAL AND IRONSTONE MINES.

TO BE SOLD, either the WHOLE or PART of LESSOR'S INTEREST in a LARGE FREEHOLD COLLIERY in one of the North Midland Counties, also a LARGE AREA of LEASEHOLD COAL, with power to work thereof as much as possible during eleven years, without any further payment to Lessor.

The coal is of high repute in the London and Southern Markets, and the plant is powerful and efficient, and included in the Lessor's interest, and is capable of raising a minimum of 4000 tons of coal per week. There is ample siding accommodation in connection with the Midland Railway Company's Main Line to London.

The Advertiser will be prepared to CO-OPERATE with the PURCHASER in WORKING the COLLIERY, finding his proportion of Capital for such purposes.

For particulars, apply to Messrs. J. and P. HIGSON, Civil and Mining Engineers, 18, Crown Buildings, Booth Street, Manchester.

FREEHOLD COLLIERY, VALUABLE IRONSTONE MINES, and ESTATE FOR SALE NEAR BIRMINGHAM. About 22 acres of MINERALS and about 15 acres of SURFACE LAND, available for building, adjoining the town of Oldbury, six miles from Birmingham—or the PITS and MINERALS would be SOLD SEPARATELY. First-class machinery, plant, and offices, in good working order.

There are also on the property valuable BEDS of CLAY and MARL suitable for making Blue Bricks and Tiles. The pits are only 20 yards from the canal basin, and the estate is intersected by the Stour Valley Railway. The Clay and Marl have been proved to a depth of 31 yards, but are believed to extend much deeper.

Apply to Mr. BINTLEY, The Oaks, Brighouse, Yorkshire.

VALUABLE LEAD MINE.

FOR SALE, the PLYNLIMMON LEAD MINE, situate in the rich Cardigan and Montgomery district.

Two shafts have been sunk, and levels driven out at the 12, 24, and 36 fms. below adit. The new engine-shaft, in the centre of the ore ground, was in course of sinking to the required depth for a 48 fm. level, at the time of ceasing operations (from want of funds and depressed price of lead at that time), and is now about 9 ft. below the 36 fm. level.

From the workings at the present depth (only 36 fms. below adit) about £40,000 of ore have already been returned. It is estimated that in the ground opened, and by driving only 20 fms. in the 36, there is still a reserve of 750 tons of lead ore (worth probably at present prices about £9000).

A cross-cut south has been commenced at the 12 fm. level, which should reach the south lode in about 15 fms., and if the lode is cut rich would add greatly to the value of the mine.

The mine is furnished with all usual MINING PLANT and MACHINERY, including 50 ft. WATER WHEEL and ENGINE for pumping, &c., and has the most powerful pumping gear in the county. The mine could be drained in about six weeks after commencing operations.

Particulars of leases and further information may be obtained on application to Mr. A. KARLY, Solicitor for the Mortgagors, 1



**A DIPLOMA—HIGHEST OF ALL AWARDS**—given by the Geographical Congress, Paris, 1875—M. Favre, Contractor, having exhibited the McKean Drill alone as the **MODEL BORING MACHINE** for the **ST. GOTTHARD TUNNEL**.

**SILVER MEDAL** of the Highland and West of Scotland Agricultural Society, 1875—**HIGHEST AWARD**.

At the south end of the St. Gothard Tunnel, where

## THE MCKEAN ROCK DRILLS

Are exclusively used, the advance made during eight consecutive weeks, ending February 7, was 24·90, 27·60, 24·80, 26·10, 28·30, 27·10, 28·40, 28·70 metres. Total advance of south heading during January was 121·30 metres, or 133 yards.

In a series of comparative trials made at the St. Gothard Tunnel, the McKean Rock Drill continued to work until the pressure was reduced to one-half atmosphere ( $7\frac{1}{2}$  lbs.), showing almost the entire motive force to be available for the blow against the rock—a result of itself indicating many advantages.

The GREAT WESTERN RAILWAY has adopted these Machines for the SEVERN TUNNEL; the LONDON AND NORTH-WESTERN RAILWAY for the FESTINIOG TUNNEL; and the BRITISH GOVERNMENT for several Public Works. A considerable number of Mining Companies are now using them. Shafts and Galleries are driven at from three to six times the speed of hand labour, according to the size and number of machines employed, and with important saving in cost. The ratio of advantage over hand labour is greatest where the rock is hardest.

These Machines possess many advantages, which give them a value unapproached by any other system of Boring Machine.

THE MCKEAN ROCK DRILL IS ATTAINING GENERAL USE THROUGHOUT THE WORLD FOR MINING, TUNNELLING, QUARRYING, AND SUB-MARINE BORING.

The MCKEAN ROCK DRILLS are the most powerful—the most portable—the most durable—the most compact—of the best mechanical device. They contain the fewest parts—have no weak parts—act without SHOCK upon any of the operating parts—work with a lower pressure than any other Rock Drill—may be worked at a higher pressure than any other—may be run with safety to FIFTEEN HUNDRED STROKES PER MINUTE—do not require a mechanic to work them—are the smallest, shortest, and lightest of all machines—will give the longest feed without change of tool—work with long or short stroke at pleasure of operator.

The SAME Machine may be used for sinking, drifting, or open work. Their working parts are best protected against grit and accidents. The various methods of mounting them are the most efficient.

**N.B.**—Correspondents should state particulars as to character of work in hand in writing us for information, on receipt of which a special definite answer, with reference to our full illustrated catalogue, will be sent.

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STREET  
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Wines of the well known brand of the BODEGA are sold in dock sample glasses by the bottle, dozen, and quarter cask. Champagnes of every noted shipper by the bottle and glass. The prices are graduated from the wholesale shipment to the single glass. It is this system which has won for the BODEGA its great success, and which has been pointed out at great length both in the Times and other journals.

The premises stand on the historic site of the old Green Dragon, and are the largest in the United Kingdom devoted to the sale of wines wholesale and retail.

"The convivial spirit of the old house still haunts the spot, and refuses to be exorcised. . . . It is just the place for a Mining Exchange, and by the silent but irresistible law of fitness it seem already to have been so constituted."—*Mining Journal*.—"The cosiness of a private club and the economy of the BODEGA are most happily combined."—*Continental Gazette*.

Also at 42, GLASSHOUSE-STREET; 13, OXFORD-STREET; 5 and 6, BUCKLERSBURY; THE ARCHES, LUDGATE HILL; and 72, MARK-LANE, LONDON.

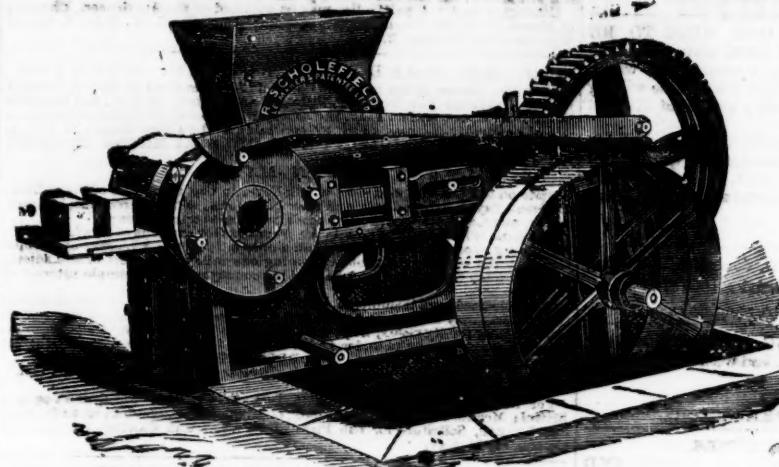
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## R. SCHOLEFIELD'S LATEST PATENT BRICK-MAKING MACHINE.



R. S. begs to call the attention of all Colliery Owners in particular to his **PATENT SEMI-DRY BRICK MACHINE**, and the economical method of making bricks by his patent machinery from the refuse that is taken from the pits during the process of coal-getting, which, instead of storing at the pit's mouth (and making acres of valuable land useless) is at once made into bricks at a very small cost, by R. S.'s Patent Brick-making Machinery. If the material is got from the pit hill, the following is about the cost of

production, and the hands required to make 10,000 pressed bricks per day:—

2 men digging, each 4s. per day	20	8	0
1 man grinding, 4s. 6d. per day	0	4	6
1 boy taking off bricks from machine, and placing them in barrow ready for the kiln, 2s. per day	0	2	0
1 boy greasing, 1s. 6d. per day	0	1	6
1 engine-man, 5s. per day	5	0	0
1 man wheeling bricks from machine, 4s. per day	0	4	0

Total cost of making 10,000 pressed bricks ... ... ... ... £1 5 0, or 2s. 6d. per 1000.

(**SETTING AND BURNING SAME PRICE AS HAND-MADE BRICKS.**)

N.B.—Where the material can be used as it comes from the pit, the cost will be reduced in digging. As the above Machinery is particularly adapted for the using up of shale, bind, &c., it will be to the advantage of all Colliery Owners to adopt the use of the said Brick-making Machinery.

THE MACHINES CAN BE SEEN IN OPERATION AT THE WORKS OF THE SOLE MAKER AND PATENTEE DAILY. SCHOLEFIELD'S ENGINEERING & PATENT BRICK MACHINE WORKS, KIRKSTAL ROAD LEEDS.

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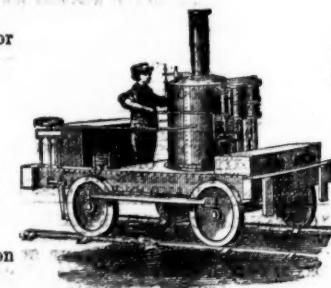
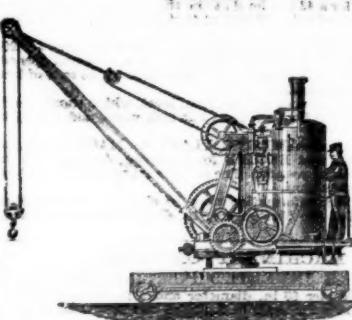
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### STEAM CRANES,

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6 to 27-horse power. For Steep Inclines and Sharp Curves.

Gauge from 2 feet upwards.

Geared to draw very heavy weights in proportion to their power, and SPECIALLY SUITABLE FOR

Contractors' Work, Railway Sidings, Coal Mines, Quarries, Gasworks, &c.

These Cranes were selected by H.M. Commissioners to receive and send away the Heavy Machinery in the International Exhibitions 1862, 1871, and 1872.

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This Wheel (which is now largely in use in England, Scotland, and Ireland) is the only one yet invented which gives proportionate power from both large and small quantities of water. It can be made for using a large winter supply, and yet work with equal efficiency through all variations of quantity down to a fifth, or even less if required. It is easily coupled to a steam-engine, and in this way always assists it by whatever amount of power the water is capable of giving, and therefore saves so much fuel.

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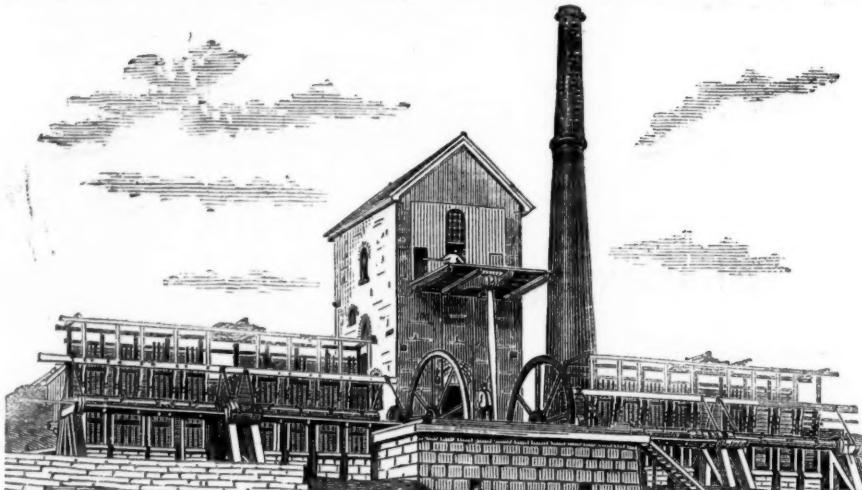
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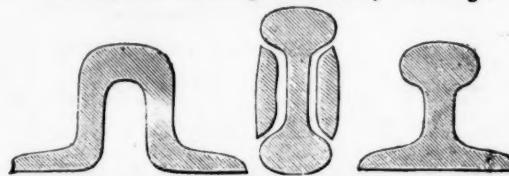
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IRON AND STEEL RAILS, of all sections, from 10 to 86 lbs. per  
yard, new perfect, new slightly defective, or second-hand, with Fish-plates  
Bolts and Nuts, Chairs, Spikes, and Pointe and Crossings to match, when re-  
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STEEL AND IRON WIRE ROPES, LOCOMOTIVE ENGINES, &amp;c., &amp;c.

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This DRILL is of GREAT  
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